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Businessweek**

March 23 — April 5, 2015 | bloomberg.com
SPECIAL DOUBLE ISSUE

The Investing Issue

You're
Doing It All
Wrong

p55



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² The Morningstar Analyst Rating is a subjective, forward-looking evaluation that considers a combination of qualitative and quantitative factors to rate funds on five key pillars, which are process, performance, people, parent, and price. Gold is the highest of four Analyst rating categories. For the full rating methodology and report, go to <http://corporate.morningstar.com/us/documents/MethodologyDocuments/AnalystRatingforFundsMethodology.pdf>.

³ Each year, Kiplinger's Personal Finance compiles a list of their favorite no-load mutual funds. The list includes 25 funds with seasoned managers, a proven track record, and low fees. Fidelity Total Bond Fund, Fidelity Intermediate Municipal Income Fund, and Fidelity New Market Income Fund were selected.

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THE CLOUD GROWS UP

**AS BUSINESSES INVEST IN CLOUD COMPUTING, THEY HAVE
BECOME MORE REALISTIC ABOUT THE OPPORTUNITIES—
AND CHALLENGES—IT REPRESENTS**

The vital role cloud computing now plays in business strategy continues to become more apparent, and investment in cloud continues to grow exponentially. The conversation about cloud has matured, too, as the challenges of adopting the technology have given way to cloud's massive potential to help drive new business outcomes previously unimaginable.

"The cloud is growing up," says Rob Glickman, Vice President of Marketing of Line of Business Solutions at SAP, the software company that offers a comprehensive and flexible portfolio of cloud solutions. "As cloud has matured into an accepted platform for business, the focus is no longer simply on IT savings and efficiencies, but rather on the huge potential for business transformation. Functional line-of-business teams—be it HR, marketing, sales or procurement—now see cloud as the enabler of the innovative business models they can create, and integrate back into their core business process."

During the past decade, an increasing number of companies have moved core functions to the cloud. Glickman points to a recent survey of 200 senior executives, carried out by Oxford Economics and SAP in 2014, that shows not only the widespread enthusiasm for the business opportunities cloud enables, but how attitudes toward cloud are changing towards more specific issues.

Nearly one-third of those surveyed said cloud has already had a transformative impact on their business performance; 61 percent said they plan to develop new services via the cloud, and 51 percent plan to develop new lines of business within the next three years. Interestingly, the survey shows that the expectations for the cloud business model have shifted from a general focus on efficiency to specific goals for innovation in supply chain, collaboration and analytics.

"As cloud adoption grows, companies are setting their sights on total business transformation by making sweeping changes to personnel, tools and processes," Glickman explains. "They're thinking of cloud from a business user's perspective—not a technology perspective—and setting specific business goals."

But what about core concerns like security, previously a major gating factor for companies

considering cloud investment? "Security has shifted from an operational to a strategic issue," states Glickman, as the heightened concern over high-profile breaches has changed the focus from the general (ensuring consistent global security) to more specific challenges (the growing role of non-IT administrators). "Organizations have accepted that data breaches are part of our new world order, and this has contributed to a huge mindset shift regarding the acceptance of cloud computing, and new focus on change management within an organization."

SAP's 2014 survey also shows that executives have grown more aware of the growth-oriented benefits of cloud. They see cloud enabling business in many areas, including deeper employee engagement, customers and suppliers; improved HR and talent management; the redistribution of purchasing power among business units; and even top-line growth.

"SaaS adoption is growing rapidly across key business functions, with roughly two-thirds of respondents saying that marketing, purchasing and supply chain are 'somewhat or mostly' cloud-based, and three-quarters saying so of innovation and R&D," Glickman adds. "Because cloud is flexible, it frees companies from thinking about infrastructure so they can focus on innovation and growth in a scalable, affordable way that was impossible even just five years ago."

Cloud's evolution into the mainstream and the renewed focus on business outcomes has also changed SAP's business focus. Once known primarily as an enterprise resource planning (ERP) software company, SAP's business now focuses on solutions across all lines of businesses—and all available in the cloud—as well as platform solutions, which all plug into the world's largest business network.

"It's less about the deployment method and more about the desired outcomes for our customers," says Glickman. "SAP's approach is unique—not just because of our technology, but because of our approach towards simplifying this complex new world for our customers. Everything we do focuses on how people get work done. We know our clients' better than anybody, and we are typically the only party that can bring IT and line of business leaders to the table across shared business priorities." ●

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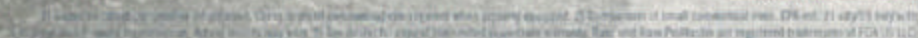
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“Do we really think that technology from the 1970s is what we should be going to Mars with?”

p37

“Ninety percent of the people who trade lose. They’re degenerates. I’m trying to give structure to junkies”

p84

“People will say, ‘How the hell did that old man get so fast?’”

p44

How the cover gets made

1

"The cover is our special Investing Issue."

"There is no other topic I look forward to more, alas. I've found the dividends on my own portfolio to be vexing, and I'm eager to be elucidated on how to correct this, posthaste."

"What do you suggest for a creative approach?"

"Well, if the point of the content is to perhaps correct some of the things that readers may be doing wrong, may I suggest we create something that embodies the essence of 'wrong' in the investment world?"

"Please, go on."

"I propose we take the classic illustration representing savings, which is a human inserting coins into a bank in the shape of a swine, and we invert it. Now the human is the bank, and the swine has whimsically taken on the traits of the human."

"May I dare to state that this is genius and take this opportunity to boldly announce that I am honored to be your creative collaborator."

(laughter, followed by Champagne toast)

"I fear to say that our challenges may not be over. We have yet to address the issue of typography. The delicate balance between letterforms and image could very well jeopardize our campaign if not executed with the utmost precision!"

"Fear not, for I have already consulted with the best typographers in the world, searching for a font that is the quintessential embodiment of 'fun.' Furthermore, I have taken this font and had it painstakingly redrawn to our demanding specifications, sparing no expense."

"I may be exposing my woeful ignorance, but I see no difference between the original font and the redrawn version."

"That, good sir, is because the best design is the one you do not see."

(more laughter, affirming handshake)

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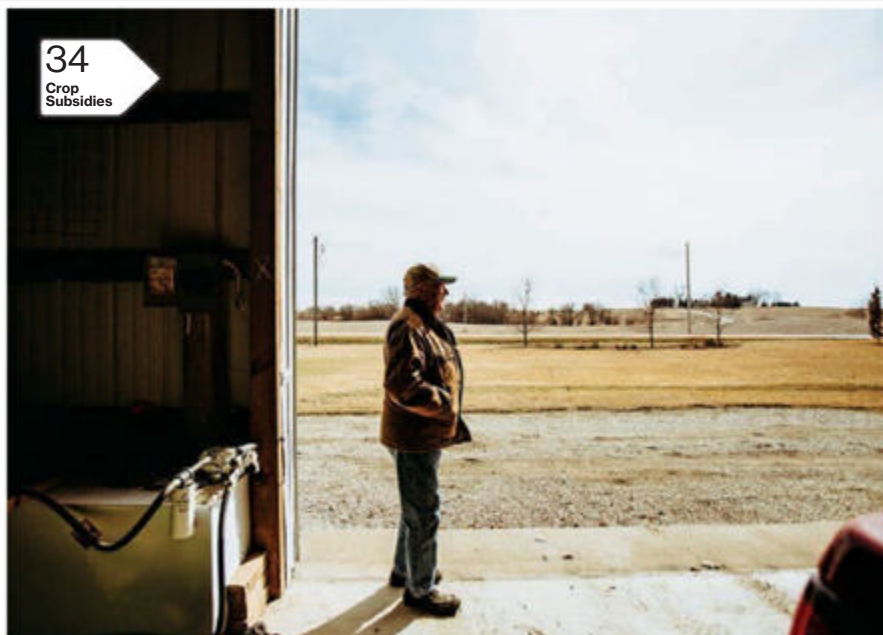
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S1

FROM STEAMSHIPS TO SPACESHIPS: 130 YEARS OF MITSUBISHI HEAVY INDUSTRIES

In 1884, the predecessor of Mitsubishi Heavy Industries Ltd. (MHI) entered the shipbuilding business, leasing a shipyard from the Japanese government. In 2015, over 130 years later, the direct descendent of that shipbuilder is building rockets that lift satellites into orbit.

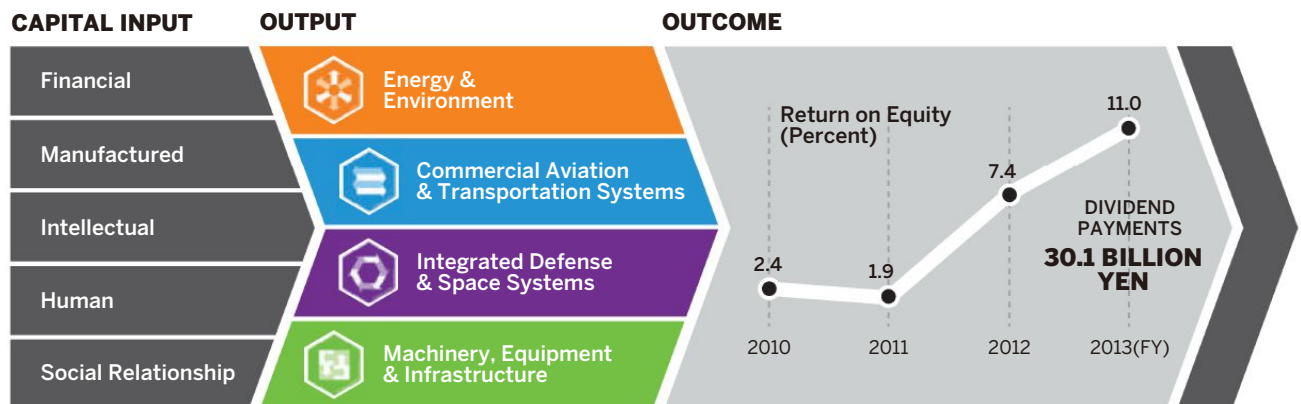
After 130 years of operation, the forecasts for FY 2014 continue to predict growth. Year-on-year net sales are expected to grow by over 19 percent to 4 trillion yen (\$38.1 billion), and operating income by 26.1 percent to \$2.5 billion.

The growth can be attributed to the results of MHI's "2012 Medium-Term Business Plan" and its two primary targets: the expansion of the scale of business; and improvement of capital efficiency and raising the level of net income. To survive and prosper, MHI has to be more than simply a leader in the Japanese market. "Lasting vitality," says Shunichi Miyanaga, President and CEO of the company, "depends on asserting global competitiveness in our core markets." To that end, the 2015 Business Plan includes the goal of becoming a highly profitable 5 trillion yen (about \$47.6 billion) business.

As one example of a strategy to achieve this competitive edge, a new power company, Mitsubishi Hitachi Power Systems Ltd. (MHPS), was formed on Feb. 1, 2014, which integrated the thermal power generation systems businesses of Mitsubishi Heavy Industries Ltd. and Hitachi Ltd. The combined strength of this new entity allows the new company to play on a global level against strong competition from around the world.

THE VALUE CREATION MODEL

To create efficiency and raise net income, MHI steers key capital facets through corporate governance and management strategies to its four major business domains, which have replaced what were previously nine separate divisions.



Another example is MHI's partnership with Siemens Metals Technologies (Austria) in a venture with headquarters in the United Kingdom. Miyanaga wants to see these two corporate cultures integrated, with the goal being to "craft an approach that harmonizes with the global market." MHI and Denmark's Vestas Wind Systems A/S launched a joint offshore wind turbine venture last year, and MHI has also invested in a Brazilian ship-builder, demonstrating a truly global outlook.

REINVENTING THE COMPANY

Portfolio management based on strategic evaluations has created efficiency and raised net income. The figures for some 60 strategic business units were plotted against two

axes: profitability and financial soundness; and business viability. Depending on where these lay, one of four positions was adopted for each unit: growth/maintenance; reform; downscale; or new business. The result has been an improvement in the "growth/maintenance" sector, with those in the "reform" sector moving into the black.

Using the Value Creation Model to integrate key capital facets of the company, these assets are then steered through management strategies to the four major business domains: Energy & Environment; Commercial Aviation & Transportation Systems; Integrated Defense & Space Systems; and Machinery, Equipment & Infrastructure. In a sweeping change to the basic structure of the company, these four domains have replaced the previous nine divisions.

In addition, other organizational reforms have been made, including the creation of new C-level executive posts; extending the role of the board of directors; and reducing the number of board members. Following a trend currently being encouraged by the Japanese government, one-quarter of the directors are now brought in from outside the company, and include the appointment of one non-Japanese female director.

As part of these governance reforms, MHI recently revised its annual company report, combining it with CSR reports. This

resulted in the report winning the grand prize in Japan's 2014 Nikkei Annual Report Awards, which cited a variety of factors, including the three main blocks that demonstrate MHI management's commitment to growth and the creation of corporate value.

The result of all these initiatives is a set of impressive growth figures, demonstrating a clear commitment to a wide variety of stakeholders. For example, the return on equity for FY 2013 was 11 percent (up from the previous year's 7.4), with dividend payments of over \$287 million; and the return on assets grew from 2.5 to 3.6 percent in the same period.

Emphasizing the company's commitment to a better world, CO₂ emissions rose only marginally year-on-year (from 533 to 538 kilotons), despite the growth in orders and income. This emphasis on being a good global citizen is also shown in the continuing drop in CO₂ emissions from the use of MHI products: about 30 million tons less in FY 2013 than in FY 1990.



ENERGY & ENVIRONMENT

Forecast to generate more than 42.5 percent of net sales and over 55.8 percent of operating income in FY 2014, this business domain is key to MHI's continued success.



Mitsubishi Heavy Industries President and CEO Shunichi Miyanaga

With power generation (both thermal and nuclear plant) expertise, this unit also provides customers with chemical plants, renewable energy systems and marine engines.

The joint venture with Hitachi, MHPS, has produced a synergy in the field of thermal power plants, where MHI was traditionally strong in large projects in Southeast Asia and the Middle East, while Hitachi had its strength in smaller plants located in Europe and Africa.

The domain sees nuclear as an indispensable part of the power generation mix, and is currently involved with a Turkish project, partnering with Areva SA.

Technical developments, such as the gas turbine combined-cycle power plants that use exhaust gases from the primary turbine to drive secondary turbines, as well as the development of renewable energy sources such as wind turbines, all help reduce CO₂ emissions (currently over 40 percent of the world's CO₂ emissions are power generation-related). MHI is also a leader in systems to recover and extract CO₂ from flue gases emitted by coal-fired power generation plants. "Our domain can improve the social infrastructure in the areas of energy and the environment. Our expertise is in power generation, desulfurization, denitration, CO₂ capture and water treatment,

The result of MHI's initiatives is a set of growth figures that demonstrate a commitment to a wide variety of stakeholders. The return on equity for FY 2013 was 11 percent, with dividend payments of over \$287 million.

allowing us to provide a one-stop solution in these related areas," says Atsushi Maekawa, the domain's CEO.



COMMERCIAL AVIATION & TRANSPORTATION SYSTEMS

This domain's business makes effective use of years of transportation experience on the land, on the sea, and in the air.

On the land, MHI is looking to build up transportation developments, from automated guideway transit systems, such as the Tokyo Yurikamome and Macau Light Rail transit systems, through to large-scale projects, such as Taiwan's high-speed line

and the Dubai Metro. MHI is leading a consortium that recently won a contract to develop and maintain the Doha Metro in Qatar, one of the world's largest single metro systems.

As the company that launched modern shipbuilding in Japan, MHI is developing next-generation technologies. Yoichi Kujirai, domain CEO, emphasizes the rising demand "for ships offering enhanced environmental performance, reflecting the need for ships with lower fuel consumption and reduced emissions." To meet this demand, MHI has developed the "Sayarango STaGE" next-generation LNG carrier, using a dual-fuel diesel-electric power train that provides a 40 percent boost in fuel efficiency compared to conventional carriers, while

S3



M501J gas turbine

steam. Not only does this boost the efficiency of the turbine from the 40 percent of conventional units to a world-class figure of 59 percent, but CO₂ and other atmospheric emissions are significantly reduced.

GTCC POWER GENERATION

Mitsubishi Hitachi Power Systems (MHPS) leads in the development and construction of gas turbine combined cycle (GTCC) power plants. Using natural gas as the fuel, these turbines recycle the heat from the exhaust gases to produce

The J-Series gas turbine operates at a temperature of 1600°C, and offers 1.2 times the efficiency of its predecessor, with over 61 percent power generation thermal efficiency, while dramatically slashing emissions. J-Series gas turbines have been installed around the world, including Asia and North America, helping utilities to meet new emissions regulations. ●



Mitsubishi Regional Jet

MRJ

The Mitsubishi Regional Jet (MRJ) is Japan's first small jetliner.

Designed to seat between 70 and 90 passengers in a cabin offering improved comfort, this next-generation regional jet is scheduled to start delivery in 2017. The first engine run has already been carried out on the first flight test aircraft, and wing up-bending tests on the static strength test aircraft have also taken place. The MRJ is powered by Pratt &

Whitney's game-changing engine. The geared turbofan design allows the compressor and turbine to operate at optimum speeds, independently of the engine fan, resulting in significant reductions in fuel consumption, noise and emissions. Mitsubishi has already received orders from airlines around the world for over 400 of these aircraft, which are seen as filling future demand for increased regional air travel, as offered by the large number of carriers. ●

carrying 16 percent more gas in the same width of vessel as before, and meeting the New Panamax standard.

MHI is a trusted supplier to the world's largest aircraft manufacturers, and has supplied various important components to the Boeing Company, Airbus SAS and Bombardier Inc. In addition, MHI is developing Japan's first small jetliner, the Mitsubishi Regional Jet.



INTEGRATED DEFENSE & SPACE SYSTEMS

MHI's products go beyond the Earth, all the way into space.

With two satellite launch vehicles in place, MHI's H-IIA and H-IIB launch services have already achieved an enviable reputation for reliability, and are achieving the goal of being a major player in the highly competitive satellite launch market.

As the Japanese government's emphasis on space shifts from exploration to utilization, MHI works with it on such commercial applications, as well as support for the international space science community in the form of resupply vehicles, such as the H-II Transfer Vehicle, for the International

Space Station. These form the foundation for lasting business development in these areas.

The Japanese Self-Defense Forces are customers for the domain's defense-related products and services. These range from advanced jet fighters to land- and sea-based transport, as well as related defense equipment, sometimes produced in conjunction with overseas partners. Hisakazu Mizutani, domain CEO, states, "MHI recognizes the importance of responding adroitly to the country's changing defense-related needs, by pursuing globalization initiatives and reinforcing its defense production and technology base." The integration of these services in one domain helps to generate synergy between the previously separated business lines.



MACHINERY, EQUIPMENT & INFRASTRUCTURE

This domain comprises some 700 product categories, ranging

from engines, metals machinery, compressors and mechanical turbines to machine tools and printing equipment, among others.

The reorganization of MHI that has included all of these in a single domain has allowed synergies in manufacturing by

sharing production facilities across product categories.

Marketing also benefits. As one of the world's largest manufacturers of turbochargers, MHI is already supplying automakers with a vital component. Domain CEO Kazuaki Kimura points out that "these turbochargers provide MHI with a foot in the door to supply other MHI products and services, such as air conditioners and manufacturing equipment, to the automotive industry. If we're supplying an automaker with turbochargers, we're also talking to the purchasing people there about our air conditioners and our machine tools, for example."

Another key strength of the domain is forklift trucks. Mitsubishi Nichiyu Forklift Co. Ltd., a consolidated subsidiary of MHI that integrates the forklift truck operations of MHI and Nippon Yusen Co. Ltd., started operations in April 2013, allowing the domain to take larger orders for these products, as well as related indoor distribution equipment.

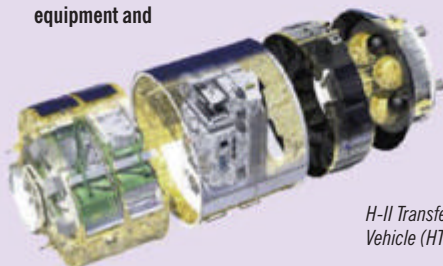
As shale gas assumes greater importance, the domain's competitive line of engines powered by natural gas (as well as its diesel and gasoline-powered engines), especially for on-site power generation, is becoming an increasingly important area of growth. ●

S4

HTV

Japan has made significant contributions to the International Space Station (ISS). One of the most important is the H-II Transfer Vehicle (HTV), where MHI is the prime production contractor of the operational HTV flights. Since the retirement of the U.S. shuttle fleet, the HTV, about the size of a large bus, is the only spacecraft capable of carrying large experimental equipment and

supplies. In 2013, an HTV carried a 4K TV camera, a power system-switching device and other supplies to the ISS, including 480 liters of drinking water. On its return into the atmosphere, the HTV burns up, along with any waste from the ISS, such as discarded equipment or used clothing. The HTV comprises four modules: pressurized and unpressurized logistics carriers, an avionics module and a propulsion module. MHI is in charge of manufacturing three of the four modules that comprise the HTV, and of the integration of the whole vehicle. ●



H-II Transfer Vehicle (HTV)

MEGANINJA

In emerging countries, there are often regions where existing power grids and systems are unable to keep up with growing demand. To meet the need for distributed power systems, MHI has developed the MEGANINJA, a mobile power plant powered by a 1.5MW gas (LNG or shale gas) engine, packaged with a generator, oil tank and control console in an ISO-standard 40-foot container that is easily transportable to wherever it is needed. Once on-site, simple fuel and power connections allow rapid installation and commissioning of the unit.

A companion waste heat recovery unit, utilizing the heat from the cooling water and exhaust gases,



MEGANINJA mobile power plant

is packaged in a standard 20-foot container, boosting the total system energy efficiency to an impressive 74.6 percent. The MEGANINJA system can provide power not only to emerging areas, but also to regions hit by disaster, where the system's easy transportation and quick setup are key advantages. ●

Opening Remarks

Valley Of the Boys

By Brad Stone

14

Will the Kleiner Perkins trial fuel a gender revolution in the tech world—or snuff it out?

There are always two stories in every Big Trial: the case itself, with its conflicting sets of facts, and the wider narrative—the way those facts fit into the lives of millions of people outside the courtroom. This was especially apparent in a San Francisco court on Feb. 27. Ted Schlein, the ultramarathon-running managing partner of the blue chip venture capital firm Kleiner Perkins Caufield & Byers, was testifying about the seven-year employment of Ellen Pao, a 45-year-old former junior partner who alleges that her advancement at the firm was blunted by an atmosphere of pervasive sexism. Kleiner's lawyer asked: Hadn't Pao complained repeatedly about being directed to sit on the outer edge of the room instead of at the center table during key meetings? Schlein flatly dismissed the charge, noting that it was a woman from outside the firm who had set up the seating chart for a meeting where Pao felt slighted. Then he added: "I really don't think it was a very big deal to us who sits at a table or who does not."

The Pao case has become Silicon Valley's version of Anita Hill's testimony during the 1991 Senate hearing for Clarence Thomas's confirmation to the Supreme Court. Her case revolves around accusations of more subtle forms of sexism and harassment than pubic hair on Coke cans—boys-only dinners, frat-house conversation on private planes, and promotions that may or may not have been withheld because Pao was that rarest of breeds in the cosseted world of venture capital: a woman.

When Pao filed her case in May 2012, people gave little thought to the gender imbalance at high-tech companies and on Sand Hill Road, seat of the powerful venture capital industry. Now leading tech companies such as Apple, Google, and Intel annually publish their lopsided internal diversity and gender numbers and publicly vow to do better. STEM (science, technology, engineering, and math) programs for girls, along with conferences for female professionals, have proliferated. A sizable amount of credit for the change goes to Sheryl Sandberg, Facebook's chief operating officer, whose 2013 best-seller, *Lean In: Women, Work and the Will to Lead*, explored the unconscious and sometimes self-inflicted strains of sexism that hold women back. If Pao wins her case, she may have Sandberg to thank. The book, with frank chapter titles such as "Sit at the Table," offers the ultimate rebuttal to Schlein: Of course it's a big deal where women sit in meetings.

Pao is asking for \$16 million in damages, but the stakes go well beyond the money. Hanging in the balance are the reputations of some of Silicon Valley's most esteemed

investors, including John Doerr, an early backer of Google and Amazon.com. He's arguably done more than any other venture capitalist to bring female partners into Kleiner and to evangelize on behalf of women entrepreneurs, and as a result Kleiner's partner directory looks far more diversified than the indefensible men-only clubs at other big venture capital firms.

Up in the air is the future of Pao, who's now interim CEO of the popular online discussion board Reddit. She's the sole plaintiff, unlike in similar cases where women employees have banded together in class-action groups to take on investment banks, accounting firms, and news organizations. Photographers covering the case have taken to shooting her each morning during the five-minute walk from an underground parking garage to the Superior Court of California on McAllister Street. She's unfailingly smiling and confident, but the pictures drive home a larger point: In this case, Ellen Pao stands alone.

To win, according to California state law, Pao must convince a 12-person jury that "her gender was a substantial motivating factor in the decision" not to promote



LIKON ALLEY

her to senior partner and ultimately to terminate her employment. In an unusual move, Judge Harold Kahn has allowed jury members to submit written questions for each witness. Their queries for Pao on March 13 were tough: “Why did you stay and work in an environment you didn’t trust from the outset?” Pao is finding it difficult to prove she’s due additional punitive damages. The judge seemed to indicate as much on March 17, referencing the standard for granting a punitive award: “I am having trouble myself right now articulating what a reasonable juror would find that constitutes malice, fraud, or oppression.”

But even if she doesn’t prevail, the trial has illustrated in uncomfortable detail a conversation many in the business world have been having since the publication of *Lean In*. Sandberg taught businesspeople to consider carefully whether women’s ideas were being received as openly as those from men and to ensure that female employees were allowed to speak without frequent interruption. She put a spotlight on the exasperating and subtle contradictions of the workplace, such as how men are often described as “confident” and

“Leadership qualities” in men are perceived as “bossy” and “territorial” behavior in women

“having leadership qualities,” while women exhibiting the same type of behavior are viewed as “bossy” and “territorial.”

Now here’s Pao accusing Kleiner of wielding many of these double standards. She says she was told that she was too passive on the boards of Kleiner’s start-ups and too quiet in meetings of the firm’s partners, which were dominated by male investors with Ph.D.s in the art of bloviation. At the same time, in performance reviews, she was accused of being too brash and competitive with peers, while another female junior partner who was also passed over for promotion was criticized for speaking too much.

“The frustration I have is that behaviors that were acceptable by men were not acceptable by women,” Pao testified on March 13, responding to a juror’s question about how she would characterize

her issues in the workplace. It echoed Sandberg, who wrote in a January *New York Times* op-ed that she co-authored with Wharton School professor Adam Grant, “When a woman speaks in a professional setting, she walks a tightrope. Either she’s barely heard or she’s judged as too aggressive. When a man says virtually the same thing, heads nod in appreciation for his fine idea.”

Pao’s case illustrates other Sandberg points, perhaps intentionally. She alleges that in 2007 she pitched the firm on an investment in Twitter and was overruled, forcing Kleiner to make a considerably less lucrative investment in 2010, led by a male partner. (“I have listened to women vent frustration over being undervalued and even demeaned on a daily basis,” Sandberg writes in *Lean In*.)

Pao has also raised an incident in which one of the firm’s senior partners, former Hewlett-Packard Chairman Ray Lane, asked her and another female colleague to take notes at a partners meeting. “I just froze, I wasn’t sure what to do,” Pao testified on the stand. Sandberg talks about the disturbing tendency of managers ►

◀ to assign the “office housework” to women. “These activities don’t just use valuable time; they also cause women to miss opportunities,” she wrote in another *New York Times* op-ed. “The person taking diligent notes in the meeting almost never makes the killer point.”

Kleiner clearly made mistakes, even if the court finds it didn’t break any laws. (The case could go to the jury as early as March 23.) The firm waited too long to fire a male partner who seemed to be treating it like his own private dating website. It promoted Pao’s male peers despite investment records that were no better than hers. And the top decision-makers at the firm—a group of six called the operating committee—were all men, typically a bad omen for gender-sensitive decision-making.

For all its societal echoes, *Pao v. Kleiner Perkins* will be decided on the facts by the six women and six men of the jury. And it’s at the granular level of workplace truths that Pao’s case is struggling.

The cross-examination, led by Kleiner attorney Lynne Hermle, has been merciless. Pao engaged in a consensual affair with a married co-worker who, she charges, made her professional life difficult after their breakup. Testimony has shown, though, that she inexplicably lobbied for the colleague not to be fired, even after her mentor, Doerr, seemed set on the man’s dismissal. Pao also suggested in an e-mail that the firm fire two other junior partners—including one woman—instead of her former lover.

Kleiner’s lawyers have also insinuated that Pao was plotting to haul the firm into court all along. They point to hundreds of thousands of pages of messages and internal memos she forwarded to her personal

For all its broader societal significance, Pao’s case is struggling at the granular level of workplace truths

e-mail address. In early settlement talks, the firm pointed out, she demanded an eight-figure payout. When asked by a juror why she didn’t consider more seriously going through mediation with her former employer, Pao answered, “It seemed Kleiner wanted a process that was quiet and confidential. I wanted an open courtroom where I could tell my story.”

To a jury, all this might seem like indecorous scheming rather than a crusade for justice. At one point in cross-examination, Hermle asked Pao if she had done anything to promote the cause of women at Kleiner or at any of the other portfolio companies where she sat on a board. Pao didn’t have a good answer.

All this back story and testimony would be enough to keep Silicon Valley talking for months. But to get a sense of how the case has turned into a Defining Valley Moment, it’s worth factoring in the material Judge Kahn has ruled inadmissible. Pao is married to former hedge fund manager Alphonse “Buddy” Fletcher Jr., who’s sued both a former employer and his New York City apartment complex for racial discrimination. His company, Fletcher Asset Management, has sought bankruptcy protection. Fletcher was previously in a long-term relationship with a man, which adds another layer of intrigue to the tale. If Kleiner loses the case, surely it will appeal on grounds that Pao’s precarious financial circumstances are actually very relevant.

That said, a Kleiner victory is well within the realm of the possible. Many women in the tech industry are concerned that Pao’s case is weak and that her accusations might exacerbate bias in the workplace. “I worry that it will make a lot more men feel that [if by] being nice to and mentoring and trying to be a good person toward women colleagues, they too will be hauled before a jury,” says Melinda Riechert, managing partner in the Silicon Valley office of law firm Morgan Lewis. For example, a key allegation in the case is that another Kleiner partner, Randy Komisar, behaved inappropriately when he gave Pao a volume of Leonard Cohen’s poems and drawings (entitled *Book of Longing*) on Valentine’s Day and asked her out to dinner on a night when his wife was out of town. Komisar says it was completely friendly and that his wife actually bought the book for Pao. Will men now retreat from cordial gestures toward female colleagues?

Tracy DiNunzio, chief executive officer of Tradesy, an online fashion site that Kleiner has invested in, says she was recently told by a male CEO that he doesn’t know how to talk to female colleagues anymore and that it’s become too easy to say the wrong thing. The case “may make it harder for men to feel free to give women the kinds of constructive criticism that men receive regularly and that they benefit from,” she says.

This is what no one wants: a step backward for women in tech. Most large technology companies say their workforce is less than 30 percent female. Only 6 percent of VC investors are women, down from 10 percent in 1999, according to a study by Babson College. And *Harvard Business Review* studies from 2008 and 2014 found that 50 percent of women working in science, engineering, or technology will leave prematurely because of work environments they deem hostile.

These numbers are dispiriting. Meanwhile, vocal women on Internet messaging boards, such as those operated by Pao’s company, Reddit, continue to get regularly harassed and inundated with abuse, including anonymous rape threats, particularly when they bring up the topic of gender fairness.

Silicon Valley sold the world on the egalitarian promise of the Internet and framed the companies that are helping to build it as meritocracies, where the best ideas win. The Pao case, and the years in which it has gradually unspooled, have laid waste to that notion and revealed tech as yet another clubby industry susceptible to the same soft and subconscious biases. Pao tried to lean into these contradictions, and it landed her in court. **B**

—With Eric Newcomer and Sarah Frier



A STAR ALLIANCE MEMBER 

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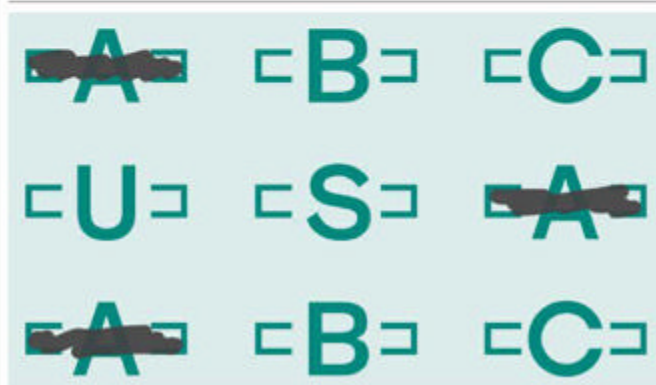


MEET ISTANBUL

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Citizens Need to Take Citizenship Tests, Too

Immigrants have to pass the simple exam. The native-born should as well



Americans love democracy and freedom—so long as there's no quiz involved. The numbers are depressing: One in four Americans don't know that the U.S. declared its independence from England. One in three cannot name a single branch of government. Three in four can't say why the Civil War was fought.

Late-night comedians and plenty of others have had fun shining a light on the dark corners of the American brain, and when faced with such obliviousness, it's surely better to laugh than cry. Better yet would be to do something about it.

More than 90 percent of students take a civics class in high school, but on a national test given in 2010, only 27 percent of high school seniors demonstrated proficiency in the subject. A core purpose of public education is to prepare young people not only for college and careers but also for the responsibilities that come with citizenship, including voting. Schools require students to meet basic standards in math and English. The same should be true of civics.

Recently, a movement has sprung up around a simple but compelling idea: requiring high school students to pass the same citizenship test given to immigrants. In January, Arizona and North Dakota became the first states to adopt such a requirement, and 19 others are considering it. Americans may have a constitutional right not to pay attention, but ignorance has never been an excuse for failing a test in high school—on civics, chemistry, or anything else.

To be clear: A citizenship test isn't a panacea for civic ignorance or the abysmally low voting rates that define U.S. elections. But if immigrants are expected to pass it before receiving their citizenship papers, it's reasonable to expect high school students to pass it before receiving their diplomas. And it's hardly rocket science.

The federal government's citizenship test contains the most basic kinds of questions about U.S. history and government, such as: "What did the Declaration of Independence do?" and "Who vetoes bills?" and "What is the capital of your state?" Each year, more than half a million immigrants take the test,

and more than 90 percent pass. Yet a survey in 2012 found that only 65 percent of native-born citizens would pass the test, which requires answering only six out of 10 questions correctly.

Critics of the test worry that states could use it as a replacement for civics classes, but there's no reason why the two can't coexist. In fact, states should adopt the test as part of a stronger civics curriculum with higher standards. Unfortunately, in 2013, the U.S. Department of Education suspended national exams in civics and history for 12th-graders as a result of budget cuts, making it harder to assess whether students are making progress—and easier for schools to walk away from these subjects.

Civic pride runs deep in American culture. It's not too much to demand that this pride be based on civic knowledge.

Have Kids? You Deserve a Tax Break

Social Security has to be funded by younger generations

Parenthood comes with a price tag: In the U.S., each little one costs roughly \$245,000 to rear, on average, not including college. Parents who undertake those costs aren't just raising the next generation, they're also subsidizing their childless peers. The tax code should do a lot more to help them out.

Entitlement programs such as Social Security and Medicare depend on younger generations to contribute payroll taxes. Non-parents don't have to pitch in for all the diapers and iPhones and orthodontics required to raise those workers, yet they're entitled to the benefits the youngsters eventually pay for.

That's not only unfair but it also creates a perverse incentive: For a given individual, generous entitlements discourage procreation by reducing the need for a child's help in old age. Yet sustaining those benefits requires the country as a whole to produce more kids.

A sensible way to alter this dynamic is through the tax code. Parents today can claim a tax credit of up to \$1,000 for each child, plus an exemption that can lower their taxable income by up to \$3,950 (phased out for higher earners). These don't amount to much, given the costs and burdens of parenting and the necessity of reproduction for sustaining public benefits.

Fair compensation would require a credit closer to \$10,000, estimates Robert Stein, a former Treasury official. That would surely be too costly. But Stein suggests a \$4,000 credit—applied against both the income tax and payroll taxes—would be reasonable and could supplant other elements of the tax code related to kids, including the child-care credit, the dependent exemption, and the adoption credit. This would simplify things, offer some relief for parents, and help correct the system's inherent bias against having children. Studies indicate that it might even boost fertility.

Procreating is a fairly fundamental duty of our species. It's especially important in nations with generous benefit systems for the elderly. Parents deserve more recognition for this vital work, along with more cash to help them do it. **B**



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1. Bloomberg, as of 2/5/15. Cash is defined as cash and marketable securities. Corporate universe is S&P 500 companies ex-financials; 2. Based on \$4.652 trillion in AUM as of 12/31/14. Visit www.iShares.com or www.BlackRock.com to view a prospectus, which includes investment objectives, risks, fees, expenses and other information that you should read and consider carefully before investing. Risk includes principal loss. Funds that concentrate investments in a single sector may underperform or be more volatile than other sectors or than the general securities market. Technology companies may be subject to severe competition and product obsolescence. The top ten holdings of iShares U.S. Technology ETF were Apple, Microsoft, Intel, Facebook, IBM, Cisco, Google (Class A), Google (Class C), Oracle, and Qualcomm, amounting to 63.5% of the fund, as of 2/13/15. Fund holdings are subject to change. This information is strictly for illustrative and educational purposes and is subject to change. Funds distributed by BlackRock Investments, LLC. ©2015 BlackRock, Inc. All rights reserved. iSHARES and BLACKROCK are registered trademarks of BlackRock, Inc., or its subsidiaries. IS-14497-0315

The Not-So-Almighty Dollar



► **There's no reason for all the hand-wringing about the strong greenback**

► **"The perception of the dollar's rise tends to be overstated"**

The dollar is pennies away from being equal to €1 for the first time since 2002. U.S. manufacturers fret that the stronger currency will kill their sales. Yet American policymakers seem blasé. Secretary of the Treasury Jacob Lew says a strong dollar is in America's interest, and Federal Reserve Chair Janet Yellen, at her March 18 press conference, said it "reflects the strength of the U.S. economy."

Why aren't U.S. officials complaining about being on the wrong end of a currency war? Two reasons. First, the dollar's rise is primarily the result of market forces and ordinary monetary policy, not market manipulation. Second is that—surprise!—the dollar hasn't actually risen much, all things considered. "The perception of the dollar's rise tends to be overstated," says William Cline, a senior fellow at the Peterson Institute for International Economics in Washington. He's a

veteran of currency turmoil; he worked for the Department of the Treasury for two years starting in September 1971, a month after President Richard Nixon roiled the foreign exchange markets by suspending the convertibility of dollars to gold. The "Nixon Shock" caused the dollar to fall against gold and other currencies, angering trading partners.

It's true that over the past year the dollar has risen 29 percent against the euro, which was worth \$1.08 as of March 18, but it's gone up considerably less against some other important currencies, such as the Chinese yuan. The right way to judge the dollar's value is to look over a long period, consider all of the countries the U.S. trades with rather than cherry-picking one or two, and take inflation into account. The Federal Reserve's broad, inflation-adjusted dollar index, which dates to 1973, does all of those things. It shows that while the dollar is indeed up 15 percent from

its 2011 low, it's still 17 percent lower than it was in early 2002. And it remains 27 percent lower than it was in March 1985, when the dollar's extreme overvaluation was killing U.S. manufacturers. "It's not a catastrophic shock," says Charles Collins, chief economist for the Institute of International Finance in Washington and a former Treasury official.

If the dollar did get too strong, it would raise unemployment in the U.S. by hurting production. Exports would fall because they'd become too expensive for foreign buyers, and imports would rise because foreign-made goods would suddenly be cheaper. A currency war is what happens when countries try to push their currencies down to generate jobs at home, palming off their unemployment problem on trading partners. The term of art is "beggar thy neighbor."

American policymakers aren't

Peak Dollar

crying about the dollar's rise because it's mostly a reaction to a good thing: relatively strong economic growth in the U.S. The demand for dollars has risen as the world's investors put their money into stocks and other U.S. assets that benefit from growth and rising profits. Likewise, the euro is sinking because investors have less faith in the ability of euro zone governments to lift their economies' growth rates.

True, the European Central Bank is exacerbating the euro's weakness through its new program of buying bonds to lower interest rates. Low rates, while primarily intended to boost borrowing and spending at home, have the side effect of making the euro decline in value, giving European nations an advantage in international trade.

But this bond-buying isn't tantamount to currency war. After all, Americans never felt they were fighting a currency war when the Federal Reserve bought more than \$3 trillion worth of Treasuries and mortgage bonds. (Although former Brazilian Finance Minister Guido Mantega did accuse the Fed of trying to devalue the dollar to gain an edge in trade.)

The test for whether a country is launching a currency war is whether it's pushing down a currency that ought to be rising—for example, by buying lots of another nation's currency with its own. Generally speaking, countries with big trade surpluses should have rising currencies, and ones with big trade deficits should have falling currencies. A surplus or deficit in the current account—the broadest measure of trade and investment income—that's bigger than 3 percent of gross domestic product is a sign that things are out of whack, says the Peterson Institute's Cline. The U.S. and euro zone balances are both safely below that threshold, indicating that their exchange rates aren't far off fair value, he says.

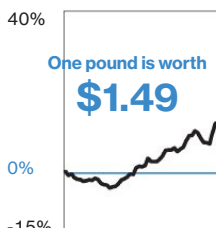
China's government engaged in currency warfare for years by suppressing its currency despite a massive trade surplus. Lately, though, even China has stopped. The yuan is little changed over the past year, and the country's current account surplus with the rest of the world has shrunk to about 2 percent of GDP, from 10 percent in 2007, according to an

Change in the value of the U.S. currency against others in the past year



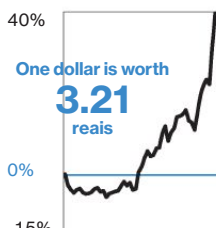
Euro zone

The euro has declined from \$1.40 last May. The European Central Bank's bond buying will lower rates and could weaken the currency further.



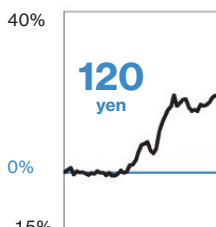
United Kingdom

Healthy economic growth has buoyed the pound, but British goods are costlier on the Continent because the sterling is at a seven-year high against the euro.



Brazil

Companies that borrowed in dollars, such as domestic airline Gol, are struggling to pay their loans. But the weaker real is good for exporters such as iron-ore producer Vale.



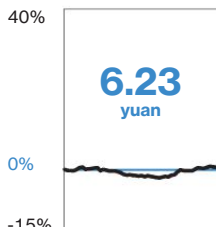
Japan

The yen's fall has done little to revive the country's growth. Central Bank Governor Haruhiko Kuroda said on March 17 that deflation might soon return, albeit temporarily.



Mexico

The central bank is fighting the weakness of the peso, which threatens to ignite inflation. But currency traders are betting the peso will reach new lows this year.



China

The yuan has kept its value against the dollar, chilling the country's growth. Economists surveyed by Bloomberg expect the economy to slow again in 2015, to 7 percent.

International Monetary Fund tally.

If Yellen and her fellow Fed rate-setters did conclude that the dollar's strength was doing serious damage to the economy, they could try to counteract its depressive effect by restarting bond purchases to bring down long-term interest rates. They aren't doing that. In fact, on March 18 they affirmed that they could begin to raise the federal funds rate as early as June if conditions warrant—a sign of cautious confidence in the U.S. economy's resilience.

All bets are off if the dollar keeps rising. Unfortunately, history shows that when traders start bidding the dollar up, they don't quit until they've overdone it. "If this dollar bull market is going to be in line with the magnitude of the two previous bull markets [peaking in 1985 and 2000], the euro will test the record lows set in 2000 around 82 cents," currency analyst Marc Chandler wrote on his blog, Marc to Market, on March 11. That big a gain, especially if matched by strength against the pound, the yen, and other important currencies, really would be a problem for the U.S. economy.

—Peter Coy, with Rich Miller

The bottom line The dollar's rise against a range of currencies is not nearly so strong as the greenback's ascent in 1985 and 2000.

Elections

Will Nigerians Get to Vote This Time?

▶ A postponed polling date has the nation on edge

▶ "I want to sell my goods all over the country, but that's not possible"

On March 28, Nigerians will go to the polls to elect the next government of Africa's most populous country. The choice is between the incumbent People's Democratic Party (PDP), led by Goodluck Jonathan, president since 2010, and the All Progressives Congress (APC), led by a former major general and onetime dictator of Nigeria, Muhammadu Buhari. Jonathan's

supporters are mainly in the more prosperous, oil-rich south, which is mostly Christian and boasts sub-Saharan Africa's largest city, Lagos. Buhari's backers come from the impoverished, mostly Muslim north. The most recent polls, taken in December, showed a dead heat, with each candidate garnering 42 percent support.

Nigerians wonder if an election will actually take place on March 28. It was scheduled for Feb. 14, but less than a week before, the chairman of the election commission postponed it, because Jonathan's national security adviser said the army needed more time to make the north safe for voters. The militant Islamic group Boko Haram has ter-

"This election is to me a life-and-death issue. I need someone who can have this nuisance sent packing from our towns."
—Falmata Modu, of Bama

rorized much of the northeast since 2009, driving about a million Nigerians from their homes. "This election is to me a life-and-death issue," says Falmata Modu, a mother of four who fled fighting in the town of Bama. "I need someone who can have this nuisance sent packing from our towns." Troops from neighbors Niger and Chad have joined the Nigerians in attacking Boko Haram. Modu supports Buhari.

"I want to sell my goods all over the country, but that's not possible with the killings in some states," says Jonathan Agbai, who sells Hewlett-Packard and other well-known computers. "We underestimated the extent of the incursion into our territory," says Mike Omeri, a government spokesman. Boko Haram's kidnapping of more than 200 girls changed that, he says. In February, just after the election commission's postponement, the government unleashed its most ambitious offensive yet against the group.

The APC had prepared for a short campaign; its resources have been stretched by the postponement, says Femi Aribisala, a columnist for the Lagos-based *Vanguard* newspaper and a former professor at the Nigerian Institute of International Affairs. "If another poll delay occurs, the chances of social unrest turning highly disruptive will significantly increase," said Manji Cheto, the London-based vice president of consulting firm Teneo Intelligence, by e-mail. Some in the APC threaten to form a parallel government if they conclude their party is cheated out of power.

The PDP, formed by members of the

former junta, hasn't been out of office since the generals ceded authority to civilians in 1999. The lack of a united opposition, until now, has allowed successive administrations to perpetuate the corruption of past dictators. A year ago, Jonathan ousted Lamido Sanusi, then-chief of the central bank, for alleged financial recklessness and misconduct after he claimed NNPC, the state oil company, had kept for itself \$20 billion due the government.

A PricewaterhouseCoopers audit in February said NNPC had not held on to such a vast sum. But the audit did say the company improperly retained \$1.5 billion and should give it to the government. When he received the PwC audit, Jonathan pledged that a new bill tightening regulatory oversight of the oil industry would guarantee the government gets its money.

Nigerians' problems are compounded by a weak currency. The naira has been Africa's worst performer since September, mostly because of the slide in oil prices. The tumble has pushed up the cost of imports of basics such as rice and fabric. In January the International Monetary Fund cut its 2015 forecast for Nigeria's economic growth to 4.8 percent from 7.3 percent. The average annual rate was 9.9 percent over the past 15 years.

It would be easy to write off Nigeria as doomed to perpetual division, violence, and corruption. In place of army rule a political system has evolved that hinges on allocating enough government posts between the north and south to maintain a fragile equilibrium. That takes money—lots of it. Senators in the capital, Abuja, make the equivalent of four times Barack Obama's salary. At election time voters are wooed with gifts of cash or rice. When these enticements fail, armed gangs are paid to rough up supporters of the other side. This battle to control the oil money caused 800 deaths and forced 75,000 to flee their homes after Jonathan's 2011 victory.

With the drop in oil prices, fewer petrodollars may prove as much of a blessing as the oil wealth of the past was a curse. A government strapped ▶

Insurgencies Pushing Back Boko Haram

The Nigerian army, in concert with forces from Chad, Cameroon, and Niger, retook territory from the Islamist militant group in northeastern Nigeria in early March. Major General Chris Olukolade visited Madagali, one of the recovered towns, shortly afterward. On March 9 the general tweeted: "We believe that together, we shall certainly defeat the forces of darkness that strive to destroy our country." —Photographs by Benedicte Kurzen/NOOR





Boko Haram used the town of Buni Yadi, which it seized in July, as a supply center



A street patrol in the recently recaptured city of Mubi



A cache of weapons taken from the militants in Damaturu on March 11



Troops celebrate in Buni Yadi by destroying the insurgents' flag

Quoted

“The new Greek government has totally destroyed the trust of its European partners.”

Wolfgang Schäuble, Germany's finance minister, speaking in Berlin on March 16 about Athens's refusal to craft a new austerity budget



“great importance” on fighting trafficking. His regime has set up centers where migrant workers can receive legal working papers. The government has extended until June a deadline for neighboring countries to verify the nationalities of undocumented workers. Canners now limit overtime to two hours a day, down from as many as five. Companies are making it easier for workers to send money home, says Thai Tuna Industry Association President Chanintr Chalissarapong. Tier 3 status prompted “us to improve our working conditions,” he says.

Providing papers to workers is “a huge deal,” says Jeffrey Labovitz, the head of the Thailand office of the Geneva-based International Organization for Migration. Papers make arbitrary detention more difficult while also helping foreigners gain access to public health care. The canneries have also cut down on child labor, says Andy Hall, international affairs adviser for the Migrant Worker Rights Network. “There’s an awareness they need to engage,” he says.

Critics in the U.S. are less impressed. There’s been some progress in registering migrant workers, says Abby McGill, campaigns director for the International Labor Rights Forum, a Washington-based nonprofit. But the Thais haven’t addressed the crushing debt loads that workers take on to pay the agents who land them jobs. Until these practices change, she says, “Thailand should remain on Tier 3.”

On March 16 the U.S. chargé d’affaires in Bangkok met with the Thai labor minister to discuss the Tier 3 designation. The dialogue “is a good sign for Thailand” in its drive to get

off the blacklist, the Ministry of Labor said in a statement. Thailand, says U.S. State Department spokesperson Pooja Jhunjunwala, still needs “significantly greater steps to protect the rights of migrant workers.” —*Bruce Einhorn, with Suttinee Yuvejwattana and Josh Eidelson*

The bottom line The U.S. State Department is pressing Thailand to address human trafficking in its factories, fishing fleets, and brothels.

B Edited by Christopher Power
Bloomberg.com

◀ for cash will need to diversify the economy and start systematically collecting taxes. A nation of taxpayers will demand delivery of basic services—water, sanitation, and electricity—and a transparent government. But first a clean election must be held.

—*Gavin Serkin and Chris Kay*

The bottom line Nigeria is headed for an election as the economy slows to 4.8 percent GDP growth from an average of 9.9 percent.

Labor

The U.S. Pushes Thailand To Clean Up Tuna Inc.

▶ A State Department report criticizes workers' exploitation

▶ “There’s an awareness they need to engage”

The migrant workers at **Chotiwat Manufacturing’s** tuna cannery in southern Thailand are not familiar with voting. Most are from Myanmar, which is emerging from military rule. And in Thailand generals staged a coup in 2014. So before Chotiwat held elections for a worker council last year, it ran workshops for 5,500 employees on the basics of democracy. Now 17 worker representatives meet monthly with company managers, says Chief Operating Officer Rick Heroux.

Thailand is the world’s top exporter of canned tuna, with sales abroad of \$2.3 billion and a 20 percent market share. The biggest canner, **Thai Union Frozen Products**, owns Chicken of the

Sea; it’s been waiting since December for approval from U.S. antitrust regulators to buy **Bumble Bee** for \$1.5 billion.

The pressure is building on the industry to clean up questionable labor practices. Four out of five workers in the canneries are foreign, part of an economic web of some 4 million migrants employed in Thailand’s factories, fishing fleets, and brothels. Last June, just after the coup, the annual U.S. report on human trafficking downgraded Thailand to Tier 3, the worst level, for nations that don’t meet the minimum standards to protect workers as laid out in the Victims of Trafficking and Violence Protection Act of 2000. Tier 1 nations are the best, while Tier 2 countries either are making progress but have a way to go or are being watched for signs of backsliding. Thailand joined Iran, North Korea, Russia, Saudi Arabia, and Syria, among others, in Tier 3. Many migrants in Thailand are undocumented. The U.S. Department of State said in its report that they are often “forced, coerced, or defrauded into labor or exploited in the sex trade.” Chotiwat and Thai Union say they adhere to strict labor codes.

The downgrade has damaged Thailand’s reputation, increasing pressure from retailers such as **Carrefour**, **Target**, and **Tesco**—all wholesale buyers of Thai canned tuna—to improve worker protections, says Max Tunon, senior programme officer in Bangkok with the International Labour Organization, which monitors worker conditions worldwide. “There’s concern,” he says, that “buyers might be looking elsewhere.”

In his weekly address on Feb. 27, General Prayuth Chan-Ocha, the prime minister, said the government places

4_m

Migrants in Thailand working in the country's underground economy

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It's about how much hope.

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"Ball of energy"

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March 23 — April 5, 2015

Sears' franchisees
have daddy issues 29

Hackers' latest target:
Law firms 30

During March Madness,
some teams don't play
but still get paid 32

Coke's Unlikely Savior



PHOTO ILLUSTRATION BY 731, ALAMY (3) GETTY IMAGES (6)

In a crowded lab on the edge of Copenhagen, food scientists at Swiss biotech company **Evolva Holding** are scrambling to help reinvent one of the world's most popular drinks. The location is no accident. The Danish city's Carlsberg brewery discovered a way to isolate pure yeast cells in 1900, which was crucial to the mass production of beer, and the town has been a hub of fermentation innovation ever since. But instead of designing a new Pilsner or bock, these researchers are harnessing high-tech yeast to craft a far different quaff: the perfect soda.

In biotech labs from California and New Jersey to Denmark, **Coca-Cola**, **PepsiCo**, and their suppliers are racing to find the industry's holy grail—a soda that tastes as good as the iconic colas, is sweetened naturally, and has zero calories. Falling out of sync with consumers' taste buds isn't the issue. A century after first appearing as a drugstore elixir, the sweet, caramel-colored beverage remains the world's most popular packaged drink. Globally, colas account for more than half of all sodas sold. The challenge for the \$187 billion soft drink industry is giving consumers in developed markets the sugary taste they want without giving them the mouthful of calories they don't. Concerns about obesity and health have led to nine years of falling U.S. soda consumption.

The soda giants can't rely on existing diet versions of their namesake colas, as consumers are shying away from the artificial sweeteners they contain, including aspartame. Critics have blamed the ingredients—rightly or not—for everything from weight gain to cancer. Diet Coke is losing U.S. sales at 7 percent a year, almost double the rate of decline of American cola sales overall. So Coke and Pepsi are turning to science to save their cola businesses, which take in about two-thirds of the industry's U.S. sales. "If you can crack the perfect sweetener, that would be huge," says Howard Telford, an analyst at researcher Euromonitor International.

America's 4 percent-a-year drop in cola sales has wiped out \$2.7 billion in annual revenue over the past five years, according to Euromonitor. The decline has pushed Coca-Cola, PepsiCo, and **Dr Pepper Snapple**, the three largest U.S. soda makers, to

► Betting science can goose growth, the cola king embraces stevia

► "If you can crack the perfect sweetener, that would be huge"

◀ crank out new beverages, including energy drinks and even designer milks. But soda makers have too much at stake to simply resign themselves to cola's slow decline.

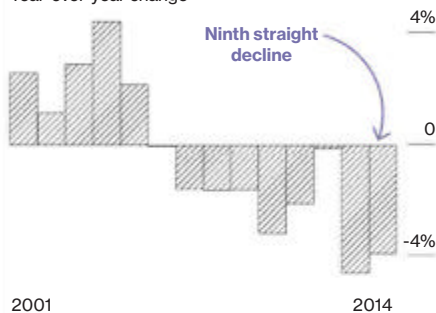
Researchers are focusing on finding new sweeteners for a simple reason: That's where almost all of a soda's calories come from. The classic American cola is 90 percent carbonated water; the next most plentiful ingredient is calorie-laden sugar or high fructose corn syrup. A 12-ounce serving has 140 calories or more, as much as three Oreo cookies. But soda makers must tread softly when changing sweeteners, because they also help provide what food chemists call mouth-feel—the liquid's sensation on the tongue and in the back of the throat.

In recent years the industry has settled on stevia, a plant long chewed by the Guarani Indians of Paraguay, as the most promising no-calorie sugar substitute. The U.S. Food and Drug Administration in 2008 green-lighted use of a key stevia molecule, called rebaudioside A, that's as much as 300 times sweeter than sugar. By 2014 stevia accounted for 11.4 percent of the global sweetener market, says researcher Future Market Insights; it forecasts stevia's share among sweeteners will grow to 15 percent by 2020. Coca-Cola uses stevia variants in at least 20 products globally, including the green-labeled Coca-Cola Life that began a slow U.S. rollout last year. It's also used in Pepsi True, which is sold in a few U.S. cities and on Amazon.com.

Although reb A works well in drinks such as tea, it faces a hurdle in cola: The more it's used, the more the molecule's licorice aftertaste lingers. To blunt that off taste in Coca-Cola Life

U.S. Cola Sales Fizzle

Year-over-year change



DATA: EUROMONITOR, U.S. FOOD AND DRUG ADMINISTRATION

and Pepsi True, their makers have mixed stevia with some sugar. The drinks have a third fewer calories than traditional sugared colas but far more than an all-stevia product.

Scientists have since found dozens of stevia molecules with less bitter aftertastes. These molecules make up less than 1 percent of the leaf, so using them could require more land and water to grow the plant, which would drive up costs. To tackle the supply problem, Evolva's scientists in Copenhagen are working with stevia genes that generate the best-tasting molecules. Those are spliced into baker's yeast, which is fed glucose to trigger fermentation. The process creates precise copies of the desired molecule, like a biological Xerox machine. "It's as natural as beer or bread," says Evolva Chief Executive Officer Neil Goldsmith.

Theoretically, growing the molecules in a yeast tank would mean no limit to the stevia supply. And "the sustainability arguments are clear," Goldsmith says. The goal is to prove yeast can produce the molecules at a reasonable price on an industrial scale. Evolva has teamed up with agribusiness giant **Cargill**, a longtime sweetener supplier

to Coca-Cola. The ingredient will probably be ready next year, says Scott Fabro, Cargill's global business development director. In February, Cargill conducted an internal taste test of the sweetener in tea, berry water, lemon-lime soda, and cola. "What we have seen has delivered significantly better taste," he says. "Sugarlike taste, no aftertaste, no bitterness." In an e-mail, Coca-Cola said it continues to work with suppliers "to pursue innovations that provide safe, great-tasting sweeteners that complement our diverse range of ready-to-drink beverages."

Biotech companies including **DSM** in the Netherlands are working on their own fermentation methods. At a lab in North Brunswick Township, N.J., run by plant-science company **Chromocell**, Coca-Cola is hedging its bets. Work there is centered on enhancing sugar's taste, so less is needed to offset the aftertaste of stevia. The goal is to cut the sugar by at least 90 percent without losing any of the clean sugary taste. Chromocell takes taste receptor cells from animals and records how they respond to contact with specific sweet molecules from plants. "We have the technology to make them [react] exactly like they are in your mouth," says Chromocell CEO Christian Kopfli.

The various sweet plant molecules are cataloged in a huge flavor library and mixed in various combinations to achieve maximum sweetness and minimal calories. So far, Chromocell has replaced as much as 33 percent of the sugar that's mixed with stevia without degrading taste. Getting to 90 percent may take five years more, Kopfli says.

PepsiCo's partner, **Senomyx**, in San Diego, is also focused on flavor enhancers and uses a process similar to Chromocell's. But Senomyx works with

War of the Sweeteners



Sucralose
Brand name
Splenda
Sweetness potency
600 times table sugar
FDA approval
1998, 1999*

Saccharin
Brand name
Sweet'N Low
Sweetness potency
200x–700x table sugar
Year discovered
1879

High Fructose Corn Syrup
Sweetness potency
Generally the same as table sugar
Sugars present
Glucose, fructose

Acesulfame Potassium
Brand names
Sunett, Sweet One
Sweetness potency
200x table sugar
FDA approval
1988, 2003

Aspartame
Brand name
Equal
Sweetness potency
200x table sugar
FDA approval
1981, 1983, 1996

Stevia
Brand names
Truvia, Pure Via
Sweetness potency
200x–400x table sugar
FDA status
High-purity varieties generally recognized as safe



mostly synthetic molecules. Senomyx spokeswoman Gwen Rosenberg says the research is in the “discovery phase.” PepsiCo Chief Scientific Officer Mehmood Khan declined to discuss specifics about its sweetener research.

All of this science is likely to raise red flags for some consumers, who are increasingly demanding “natural” ingredients in foods and drinks, says Euromonitor’s Telford. Then there’s the cost. As with molecules created by fermentation, sweetness enhancers will have to be price-competitive with sugar and artificial sweeteners to be commercially viable. So while scientists may find cells from, say, a Himalayan orchid that heighten sugar perception, they might also come at twice the cost of sugar, cautions Chromocell’s Kopfli. “Consumers are very demanding,” he says. “They say, ‘Less calories and same taste, but I’m not willing to pay more for whatever it is.’” —*Duane D. Stanford*

The bottom line U.S. cola consumption is falling by about 4 percent a year. Soda makers are seeking new sweeteners to reverse the trend.

Retail

Breaking Up With Sears Is Hard to Do

▶ Hometown owners say a spinoff from Sears has hurt them

▶ “Spending \$15 to \$20 to assemble a grill I’m going to make \$8 on”

Doug Shumard had semi-retired from running an auto-service business when he decided to buy a Sears Hometown franchise in Lincoln, Ill., in 2008. The \$80,000 in startup costs seemed to be a good investment. The Hometown and Outlets division was one of **Sears Holdings’** most successful when Shumard bought in. The stores, totaling about 1,300 today, are located in smaller towns across the U.S., far from the retailer’s regular department stores, and feature Sears brands, including Kenmore appliances and Craftsman tools, as well as clearance merchandise.

But ever since Sears spun off the Hometown division in 2012, Shumard and other owners say their business has gone downhill. They’re struggling to stay afloat, they say, after finding

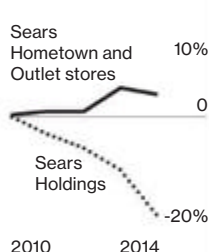
some inventory hard to procure and being held responsible for goods never received. They also say the stores are suffering from their connection to the former parent company, which has posted \$7.1 billion in losses since 2011.

“Their fate is really intertwined with that of Sears,” says Matt McGinley, an analyst at research firm Evercore ISI. “Given that Sears has issues over the long run, does this hurt the franchisees? I think the answer is definitely yes.” The spinoff was supposed to give owners more autonomy to run their businesses; the parent company would benefit from the \$446.5 million the deal put in its coffers, as well as royalties and service fees. “They did this because they needed liquidity,” McGinley says.

Appliances account for most of the sales at Hometown stores. The category grew steadily as the U.S. economy improved after the recession. In 2011, the year before the spinoff, the Hometown operation brought in less than 6 percent of Sears’s sales but about 25 percent of the company’s profit. Hometown’s properties include about 930 Sears Hometown, as well as 85 Sears Hardware, 115 Sears Outlet, and 100 Home Appliance stores.

Sears Holdings, which still owns the Sears and Kmart department stores, supplies about 84 percent of Hometown’s merchandise. The two companies share a top stockholder, Edward Lampert, chairman and chief executive officer of Sears Holdings. The spinoff was Lampert’s decision, part of a broader breakup that has included sales of some Sears locations and the separation of

Change in Annual Revenue Since 2010



the Lands’ End division last year. Hometown collects merchandise payments from owners and pays them commissions. Shumard says he fought with Sears Hometown over a lack of inventory and payments. By February 2014, he wanted out and handed ownership over to Hometown. Richard Hansen says the spinoff made running his business in

Picayune, Miss., more difficult: “I lost thousands of dollars because I could not get lawn and garden product. I didn’t have basic washers and dryers in stock.”

The money Hometown pays owners as part of a bonus program for assembling goods themselves wasn’t worth it, Hansen says: “I’m spending \$15 to \$20 to assemble a grill I’m going to make \$8 on.” Hansen handed his store over



Sears Outlet store, N.C.

to Hometown in 2013 before his contract was up. He tried but failed to find a buyer willing to cover the \$60,000 he paid for the store in 2001. Bizbuysell.com, which advertises franchises and other busi-

nesses for sale across the country, lists prices on 53 Hometown stores ranging from \$4,000 to \$850,000. All but seven are asking less than \$100,000.

Sears Hometown disputes the owners’ claims, saying it’s made promised deliveries and that the stores are stocked. “The amount of those inventories has remained largely unchanged for several years,” says Jayne Levy, a Hometown spokeswoman, adding, “We do not charge our dealers for merchandise that they do not receive.” And, the company says, complaints that sales commissions are lower today than they were before the spinoff are unfounded. Sears Holdings spokesman Chris Brathwaite declined to comment, saying Sears Hometown is now a separate entity.

Hometown owners complain they are in direct competition with Sears. The latter’s e-commerce site, Sears.com, and the department stores offer free delivery and installation on many items, whereas Hometown stores run their own delivery programs and must cover many of those costs.

Competition with Sears is a key complaint in a class-action lawsuit filed by owners of Hometown stores in Canada, which are still part of Sears Canada. The suit, filed in the Ontario Superior Court of Justice on behalf of about 260 stores, accuses Sears Canada of not honoring its obligations to owners, competing with them, and depriving them of the ability to earn a living. The plaintiffs are seeking \$100 million in damages. Owners in Canada have ▶

◀ “effectively been orphaned by Sears Canada,” says David Sterns, a lawyer in Toronto representing the plaintiffs.

“We do not agree with the assertions made in the case,” Sears Canada spokesman Vincent Power says. Sears Holdings, which owns 12 percent of Sears Canada, declined to comment; Lampert and his hedge fund own 49.5 percent of Sears Canada. Dozens of U.S. owners and former owners considered taking similar action, some owners say, but an arbitration clause in their contracts makes a lawsuit unfeasible.

Hansen, who walked away from his store in 2013, says his health has since improved. “My blood pressure’s gone down,” he says. “Since I’ve given the store back, I’ve had such a sense of relief.” —*Lauren Coleman-Lochner*

The bottom line Hometown franchisees and operators say their business has suffered since Sears spun off the division.

Lawyers

Cyber Attacks Upend Attorney-Client Privilege



▶ Security experts say law firms are perfect targets for hackers

▶ “You’ve either already been a victim, currently are a victim, or will be”

“Dear Clients,” began the letter that law firm **Ziprick & Cramer** sent out in late February. “It is almost a daily occurrence that we read about cyber attacks in the news. Unfortunately, on or around January 25, 2015, our firm was the victim of a single cyber attack, by a relatively new variant of a Cryptolocker-type virus.” Cryptolocker is a kind of ransomware used to encrypt files so they’re unreadable; hackers then demand money to restore the data.

A security breach is one of the last things a lawyer wants to admit to a client. But the small firm in Redlands, Calif., faced it head-on, reporting the

attack to the FBI and calling on its IT specialist to assess the damage and install safeguards to thwart future attacks. Partner Robert Ziprick says clients have been sympathetic and understand hacking is a problem for lots of businesses. “A lot of them are trying to figure it out, too,” he says.

Law firms of all sizes are vulnerable. Cybersecurity firm Mandiant says at least 80 of the 100 biggest firms in the country, by revenue, have been hacked since 2011. In 2012, Bloomberg reported that the large Washington firm **Wiley Rein** was targeted by hackers linked to China’s military in connection with a trade dispute it was handling for a maker of solar panels. **McKenna Long & Aldridge** lost Social Security numbers and other employee data last year when one of its vendors was targeted, the firm reported.

Since at least 2009, the FBI, the U.S. Secret Service, and other law enforcement agencies have warned the managing partners of big U.S. firms that their computer files are targets for cyberspies and thieves in China, Russia, and other countries, including the U.S., looking for valuable information about potential corporate mergers, patent and trade secrets, litigation plans, and more.

“If you’re a major law firm, it’s safe to say that you’ve either already been a victim, currently are a victim, or will be a victim,” says Chad Pinson, a managing director at Stroz Friedberg, a New York-based cybersecurity firm. “The question is, what are you doing to mitigate it?”

Pinson and other providers of cybersecurity services say law firms aren’t doing nearly enough. But that’s changing as firms come under pressure from clients to bolster defenses. Many Wall Street banks, including **Bank of America** and **Merrill Lynch**, typically require law firms to fill out up to 20-page questionnaires about their threat detection and network security systems. Some clients are even sending their own security auditors into firms for interviews and inspections.

Scott Angelo, chief information officer at law firm **K&L Gates**, says client scrutiny is helping to “move the needle” on cybersecurity across the industry. “Firms that are serious about their business are all taking it seriously,” he says. His firm recently enhanced its security measures and has two full-time staffers who spend most of their workday monitoring the network for potential threats and testing its defenses. Angelo regularly hires consultants to run “white hat

hacking exercises”—tests that simulate real attacks to try to identify vulnerabilities. Protecting the firm doesn’t come cheap. “If you’re not spending seven figures on security,” he says, “you’re not spending enough.”

Some law firms have brought in consultants to help them upgrade security policies and systems and then certify that their networks are safe. At

Shook, Hardy & Bacon, CIO John Anderson says his IT team recently spent 18 months and \$60,000 to obtain ISO/IEC 27001 certification, a sort of Good Housekeeping seal for compliance with globally recognized security standards. The firm now promotes the certification in marketing materials and client pitches, he says.

Rival law firms are even banding together to address the problem. An alliance of leading firms in New York and London—including **Linklaters**; **Paul, Weiss, Rifkind, Wharton & Garrison**; and **Sullivan & Cromwell**—will share information about threats and work with financial institutions to devise best practices for the legal industry. “No one entity has the complete picture,” says Carl Leonard, an analyst in London with Websense, a security consulting firm in Austin, Texas. “When these groups are willing to come together, that really talks to the difficulty that they’re having protecting their data.”

To mitigate potential damage, some firms are buying cyberinsurance in the event of a major data breach. The market is relatively small, but more firms are asking for quotes and demand is picking up, says James Rhynier, a vice president at **Chubb**, which offers such plans.

Even the most sophisticated security systems will never be completely hackerproof, says Shane McGee, chief privacy officer at Mandiant parent company FireEye, especially if the hackers are backed by a foreign government. “When you’re dealing with state actors, if they want in, they’re going to get in.” —*Susan Hansen*

The bottom line Client pressure and scrutiny are forcing law firms to beef up their cyber defenses.

B Edited by James E. Ellis and Dimitra Kessenides
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March Madness Makers and

The NCAA divides the TV riches from its single-elimination men's basketball championship tournament among 32 conferences made up of 350 Division I schools. Conferences with teams that log more wins earn more cash from a basketball fund bankrolled by TV revenue. Within conferences, however, money is evenly distributed to schools, regardless of whether they're heroes (Duke, Kentucky) or zeros (looking at you, Northwestern). —David Ingold and Adam Pearce

Difference between money earned by teams for their conference and money paid out to the teams

\$40m



Each ball represents a single school's team

Schools are continually changing conferences, typically to boost their financial haul. Louisville has switched conferences four times:

Metropolitan
1975-96

CUSA
1996-2005

Big East
2005-13

American Athletic
2013-14

ACC
2014-present

Louisville's first move →

In 2013, the Big East split into two conferences, a new Big East and the American Athletic

The nation's top basketball programs have historically belonged to one of six major conferences: the ACC, Big East, Big Ten, Pac-12, Big 12, and SEC. These conferences account for just

20%

of the teams in Division I, but they'll likely receive about

60%

of the basketball fund payout this year

Earned more than received

\$0

Last Year's Spoils

2014 NCAA revenue from tournament TV contract



\$700m

Amount given to Division I schools



\$498m

Amount given to the basketball fund...



\$194m

Amount given this year
\$199m

which has grown over time



Received more than earned

Conferences by total money earned from 1991 to 2015



Louisville's fourth move →

Takers

Kansas earned
\$66m
for the Big 12 but got
to keep only
\$24m

After earnings for various Big Ten schools are pooled and equally divided, MSU in 2015 will get back a third of the cash it brought to the conference.

Michigan State Big Ten	
Earned	\$57.1m
Received	\$24.3m

Gonzaga University plays in the West Coast Conference and is responsible for half that group's \$58 million March Madness earnings from 1991 to 2015. But it receives only 20 percent of the conference's TV cash distributions.

Earned
\$34.3m Received
\$6.8m

← Louisville's third move
Louisville's second move →

The Horizon League has twice lost its top earner to the Atlantic 10, a more financially attractive conference. Xavier left in 1995; Butler in 2012. If another program doesn't step up, the league's revenue could drop to

\$1.6m
in 2017 from
\$5m
in 2011

San Francisco West Coast	
Earned	\$0.6m
Received	\$6.8m

Northwestern has never made it to the NCAA tournament and has earned no cash for its conference. Yet it's received an estimated \$24.5 million over the years, thanks to wins by its better-performing Big Ten peers.

Southern MAAC Big West Sun Belt MAC Colonial Horizon League Mountain West West Coast MVC WAC CUSA Atlantic 10 Pac-12 SEC Big East Big 12 ACC Big Ten

Betting The Farm

34

► **Farmers have until March 31 to sign up for new crop subsidies**

► **“A lot of it comes down to whether or not you’re a pessimist”**

Every five years or so, Congress passes comprehensive legislation covering agricultural programs. Under the 2008 bill, farmers received guaranteed subsidies worth \$4.5 billion a year. In 2014, with U.S. farm profit at a record high of \$129 billion, lawmakers eliminated the payouts. Instead, they created two subsidy programs: one that insures farmers’ income in bad harvest years and one that compensates them when crop prices fall. Farmers have until March 31 to choose. Illinois farmer J. Gordon Bidner says he needs “two crystal balls” to decide. “A lot of it comes down to whether or not you’re a pessimist,” he says. Already, a worldwide grain glut has depressed prices below levels forecast by the U.S. Department of Agriculture when the bill was passed. That means the program may wind up costing billions more than Congress expected. Bidner says uncertainty comes with the terrain: “Farming is risky.” —*Alan Bjerga*

The
essentials

According to the Congressional Budget Office, subsidies to farmers under the system that ended in 2014 would have cost taxpayers

\$40.8b

through 2023. Last year, Congress created a new set of subsidies, which the CBO estimated would cost

\$27.2b

for 10 years. Because of record harvests, commodity prices have crashed. Now the CBO says the total cost will be

\$35.1b



Bidner, 78, grows 600 acres of corn and soybeans in McLean County, Ill.

Helping homeowners is harder than you think 36

The drag from NASA's Mars rocket 37

A new coolant gets a chilly reception from warm nations 40

Guardrails: Guilty before proven innocent 38

Jacksonville, the city no party can afford to lose 40

A Farmer's Choice

The case for revenue insurance

Agricultural Risk Coverage (ARC)

McLean County has consistently high corn yields that beat the national average, ranging over the past 10 years from

160 bushels an acre to

189 bushels an acre.

During the drought in 2012 average yields fell to

110 bushels an acre.

ARC would help Bidner in years when yields plummet, because his payout would keep his revenue consistent.

Cons:

Payouts are based in part on average yields, so they could be pushed down by a string of low-yield years brought on by drought or other circumstances.

Pros:

ARC promises Bidner money in the event of a catastrophic weather event that destroys a harvest, making it less likely that one or two bad years could put him out of business.

Takeaway:

ARC smooths out swings in revenue.

Price Loss Coverage (PLC)

The case for price protection

Illinois corn prices have grown less stable over the past 10 years, ranging from an annual average low of

\$2.08 a bushel in 2005 to a high of

\$6.87 a bushel in 2012.

The 2014 Farm Bill set a floor for commodity prices. Corn is set at

\$3.70 a bushel.

Since 2007 the average price of corn in Illinois hasn't fallen below \$3.53 a bushel.

Cons:

In a bad harvest year, when Bidner has less to sell, the PLC program offers no support for lost income.

Pros:

If demand for corn drops—in case of a market glut or if the government cuts mandates for ethanol, which is made from corn—PLC cushions farmers against having to sell at a loss.

Takeaway:

PLC guarantees a minimum price.

The county's worst harvest since 1988

The 2014 average price was \$3.65 a bushel

The Decision

Bidner, who's been farming since the 1970s, considered more than 1,000 scenarios when estimating his payouts under each program. He expects demand for U.S. grain to grow but is worried about a major drought.

He's signing up for ARC.

1,700,000

The total number of farms expected to sign up by the deadline. Only 1,153,300—or 68%—had registered as of March 13

The case for ARC was especially strong for Bidner's soybeans. Their guaranteed price is \$8.40 a bushel. The current USDA average is \$10.50 a bushel—well above the PLC payout trigger

"These payments won't determine whether I plant corn or soybeans, but it provides a little protection from the risk."
—J. Gordon Bidner

\$4.7b

was paid out in guaranteed subsidies in 2014

\$13.6b

less than the cost of the old subsidy system

\$7.9b

more than the CBO initially expected. The fall in commodity prices has caused the biggest single-year drop in farm profits since the Great Depression

Subprime Loans

How a Nonprofit Went Through Billions in Aid

- ▶ NeighborWorks got government money it wasn't ready to spend
- ▶ "It was appropriate to take strong corrective actions"

Michael Forster was preparing tax filings three years ago for NeighborWorks America, a government-funded nonprofit, when a number caught his eye. A company he'd never heard of, **Quantum**, had received more than \$900,000 in fees for software development, making it one of NeighborWorks' highest-paid subcontractors. Recipients of government funds are supposed to put jobs worth more than \$25,000 out for bid, but the payments to Quantum were made in dozens of installments too small to catch anyone's attention. "I asked, 'Who is this, and what the heck are we spending the money on?'" says Forster, NeighborWorks' former chief financial officer.

It was just one hint that something was wrong at the Washington-based organization, a quasi-government agency that's received about \$2 billion from Congress since 2007, much of it to help homeowners avoid defaulting on mortgages. The Quantum deal wasn't the only sweetheart contract executives gave out. NeighborWorks also awarded a multimillion-dollar technology contract to a company, **Hope LoanPort**, whose board included a former NeighborWorks board member. According to an audit, Hope LoanPort overcharged

NeighborWorks by as much as 20 times. NeighborWorks,

Quoted

formally called the Neighborhood Reinvestment Corp., says it's been a good steward of taxpayer money. Its board, which includes officials from the Federal Reserve and the U.S. Department of Housing and Urban Development, took immediate action to address shortcomings in its procurement and contracting processes, says spokesman Douglas Robinson. Audits revealed irregularities but no fraud. U.S. Comptroller of the Currency Thomas Curry, the chairman of NeighborWorks' board, oversaw recent changes. "It was appropriate to take strong corrective actions," he wrote in an e-mail. A new chief executive officer, Paul Weech, started earlier this year.

\$50_m

How much NeighborWorks was supposed to spend in 60 days in 2008

NeighborWorks' federal funding, to more than \$347 million from less than \$120 million a year. Under the 2007 National Foreclosure Mitigation Counseling program, Congress gave NeighborWorks 60 days to give out \$50 million. The group wasn't prepared for the scale of the task, says Forster, who left NeighborWorks for a new job in 2014. "I don't know that we were built or designed to move that fast," he says.

Established by Congress in 1978, NeighborWorks originally ran urban revitalization programs. It branched into promoting homeownership to stabilize distressed areas and now funds energy efficiency programs and community gardens. One of NeighborWorks' biggest

The trouble at NeighborWorks illustrates how haphazardly billions in government aid for homeowners has been spent. In 2008, at the height of the subprime mortgage crisis, Congress almost tripled

jobs came in 2010, when HUD hired it to administer the \$1 billion Emergency Homeowners' Loan Program, which gave as much as \$50,000 to people who couldn't meet their mortgage payments.

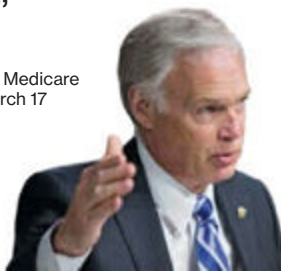
NeighborWorks needed help processing applications and turned to Hope LoanPort, which had ties to HUD. "In some ways the whole project came with Hope LoanPort attached to it," says Forster, who approved the memorandum justifying the no-bid Hope LoanPort contract. NeighborWorks paid Hope LoanPort about \$20,000 a month for Web hosting, according to an internal audit, while others were charged just \$2,000 to \$2,700 for similar services. Hope LoanPort, which is still under contract to NeighborWorks, eventually billed more than \$3 million over two years, including costs that "would probably be considered inordinate," NeighborWorks' auditor wrote. Camillo Melchiorre, president and chief executive officer of Hope LoanPort, says the charges were warranted because his team was managing large amounts of data, rather than just hosting documents as described in the audit. "It would be like comparing a Mercedes to a Volkswagen," he says.

The billion-dollar emergency loan program that Hope LoanPort's services supported fell short of expectations. HUD initially said the program would allow it to extend interest-free loans to as many as 30,000 homeowners. NeighborWorks' audit said fewer than 3,000 were served. The gap was the result of delays at HUD and the failure of applicants to qualify under the program's strict rules, a HUD audit found. The Treasury Department eventually clawed back about half of the \$1 billion in unspent funds. HUD spokesman Brian Sullivan declined to comment.

As NeighborWorks' budget and mission expanded, it spent millions to upgrade software. It planned to develop a Web application to train housing counselors. Instead of putting that job up for bid, two managers in NeighborWorks' information-technology department quietly awarded it in 2011 to Quantum. The company was run by Teddy Wondwosen, a former NeighborWorks employee, and headquartered at his apartment. NeighborWorks ultimately paid Quantum more than \$2.1 million. Forster froze the project in 2013 and ordered an external audit. The board ordered two more reviews. In 2014 law

"Let's face it, these solutions will not be popular."

Wisconsin Republican Senator **Ron Johnson**, on cuts to Medicare and other programs proposed by the House GOP on March 17



firm Venable delivered an oral account to the board: It found no evidence of fraud, according to a person familiar with the group, who asked not to be named because details of the investigation aren't public. "We were expecting the contract to be reinstated, and then I guess there turned out to be a larger issue with processes at the organization," Wondwosen says. He hasn't been accused of any wrongdoing.

NeighborWorks may be in line for more public funds. It's named as a beneficiary in settlements that the U.S. Department of Justice struck with **Citigroup** and **JPMorgan Chase** over subprime mortgage securities. Should those banks fail to deliver \$6.5 billion in relief to homeowners in coming years, as required, the nonprofit will be tapped to distribute the remainder. **Bank of America's** settlement lists NeighborWorks as one of two such beneficiaries. —*Tom Schoenberg and Clea Benson*

The bottom line A taxpayer-funded nonprofit that had trouble managing money for struggling homeowners is still in line to get more cash.

Space Exploration

NASA Builds a Giant Mars Rocket, at a Price

► Congress pushes for more spending on space exploration

► "Let the transport part be handled by the private sector"

When NASA tries to put a human on Mars—a mission now set to take place sometime between 2035 and 2040—the agency plans to propel its Orion spacecraft toward the planet with the aid of the most powerful rocket in history. Prosaically named the Space Launch System (SLS), its first version is taller than the Statue of Liberty and capable of lifting 70 metric tons. Later models will catapult Orion into deep space the same way the Saturn V rocket powered Apollo to the moon decades ago. According to William Gerstenmaier, NASA's associate administrator for

human exploration and operations, the SLS "will be a national asset for human exploration and science missions."

Critics of the SLS say NASA should be buying rockets from private companies such as **SpaceX** or the United Launch Alliance, a **Boeing-Lockheed Martin** joint venture, rather than commissioning its own. "Do we really think that technology from the 1970s is what we should be going to Mars with? It boggles my mind," says Lori Garver, NASA's former deputy administrator. The SLS uses four RS-25 engines, the same model that powered the space shuttle, and the design for its two boosters was cribbed from those used on the shuttle, too.

SpaceX founder Elon Musk has said he's developing a version of the company's Falcon rocket that can carry 53 metric tons into space. Unlike NASA, which is building the SLS with single-use engines, Musk intends to make the SpaceX rockets reusable, which would lower the cost of launches. "Let the transport part be handled by the private sector," says Garver, who was appointed NASA's No. 2 by President ►

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The SLS rocket booster has the thrust capacity of 13 Boeing 747 jets. It will be used to propel the manned Orion space capsule on planned lunar and Mars missions.

DATA: NASA, BOEING

◀ Obama in 2009 and left in 2013 to become general manager of the Air Line Pilots Association.

NASA's preoccupation with building a rocket may come at the expense of advances in other critical pieces of the Mars program, says Henry Vanderbilt, founder of the Space Access Society, a research group that advocates for lower-cost approaches to space exploration. "You can make the argument that with that rocket as a drag on NASA's budget, we're never going to be at Mars," he says.

The Obama administration has quietly made the same case in its annual budgets, which have shifted resources away from space exploration and into scientific research like soil analysis. In 2010, President Obama canceled Constellation, the space program he inherited from George W. Bush, after a commission found NASA's budgets were too small to support its ambition of returning American astronauts to the moon by 2020.

Aerospace contractors successfully lobbied Congress to keep funding deep space exploration and NASA's rocket development programs, leading some to dub the SLS the "Senate Launch System." In December, Congress approved \$1.7 billion for the SLS for 2015—\$320 million more than Obama requested. "It's time for man once again to leave the safety of the harbor and to further explore the deep, uncharted waters of deep space," said Texas Republican Senator Ted Cruz, who

chairs the Senate subcommittee that oversees NASA, at a March 12 hearing.

SLS fans say private players can't, and won't, develop heavy-lift rockets without NASA's help. "We can't kid ourselves—there's no market for Mars," says Jason Davis, a blogger for the Planetary Society, a nonprofit that advocates for space exploration. "When it comes to something like Mars, NASA has to be the trailblazer for it."

Bill Hill, NASA's deputy associate administrator for exploration systems development, says NASA is working to make SLS flight costs "competitive with other folks in the market" by lowering the cost of its disposable engines. "That's our mantra right now," he says. NASA has also tried to speed commercial rocket development by sharing its propulsion research data with companies such as SpaceX, Jeff Bezos's **Blue Origin**, and **Orbital ATK**, the contractor building boosters for the SLS. "There's an impression that the commercial guys are basically paying their own way," Hill says. "But if you dug into it, you may find that is not necessarily the case."

On March 11, Orbital ATK successfully tested the SLS's solid rocket booster in the Utah desert, heating it to 90F to simulate summer weather at Cape Canaveral in Florida and blasting the engines for two minutes. The next test—a cold firing at 40F—is planned for early 2016. If that goes

well, the SLS will have its first flight in late 2018, when it will transport an unmanned Orion capsule around the moon and back. —*Justin Bachman*

The bottom line Critics say NASA's push to build a rocket for deep space travel may ultimately make a Mars mission too expensive.

Highway Safety

The Saga of the 'Killer' Guardrails Isn't Over

▶ Regulators find Trinity meets standards, but no one's happy

▶ "In none of the eight tests was there any spearing of the cabin"

Trinity Industries, the largest manufacturer of highway guardrails in the U.S., is facing litigation hell. In October a Texas jury found that the Dallas-based company failed to inform federal officials of changes it made to its best-selling **ET-Plus System**—the yellow-and-black shock absorbers visible along the sides of highways across the U.S. That verdict, if upheld on appeal, could lead to damages of \$525 million or more and has triggered about two dozen product liability suits and inquiries from members of Congress. Forty-two states and the District of Columbia have



suspended ET-Plus installations.

On March 13, however, the Federal Highway Administration released fresh data indicating that Trinity's guardrails do in fact meet federal safety specifications. Now Trinity, with a market cap of \$5.3 billion, is stuck with the anomalous predicament of a mammoth negative court judgment that's attracted a welter of follow-on litigation even as the federal government says it can't find a problem with the company's product.

In an accident, the ET-Plus is supposed to mitigate damage by sliding backward and pushing aside the roadside metal rail until the errant vehicle comes to a stop. Plaintiffs claim the device locks up on impact, causing the rail to "spear" cars and maim or kill drivers. The FHWA ordered a battery of eight crash tests in the wake of the Texas fraud verdict last October. Engineers slammed remote-controlled vehicles into guardrails and concluded that in all eight collisions the ET-Plus met "applicable crash test criteria," the FHWA said in a prepared statement. The agency says it will continue to investigate, but the results so far appear

to contradict the graphic images of killer guardrails plaintiffs' lawyers have presented in court and via the media.

"We're pleased—and not at all surprised—that the ET-Plus performed so well," Dean Alberson, assistant agency director of the Texas A&M Transportation Institute, which designed Trinity's technology, said in a statement on March 13. "In none of the eight tests was there any spearing of the cabin by a guardrail, nor did any of the crash vehicles roll over." Trinity spokesman Jeff Eller said in a separate e-mail: "The ET-Plus System has been successfully crash tested more times than any product of its kind. It has an unbroken chain of eligibility for federal aid reimbursement from the FHWA."

The test results could add momentum to Trinity's appeal of the Texas verdict. The Texas case was filed by a private plaintiff—Joshua Harman, a whistle-blower and previous litigant against the company—under the federal False Claims Act. The U.S. Department of Justice has the option of joining such suits, adding the imprimatur of the

federal government. It didn't do so in this instance—a demurral that's not unusual. What was unusual in this case was that right up until trial, the FHWA said it backed Trinity's gear.

The jury in Texas considered only whether the company defrauded the government, not the effectiveness of Trinity gear. Yet based on the Texas verdict, plaintiffs' lawyers representing crash victims in other suits are expected to portray Trinity as a company that tricked regulators. These plaintiffs' advocates have a built-in advantage suing a guardrail manufacturer: Suits arise only after a wreck, often one with serious damage and injury. Many factors can contribute to a crash—speed, weather, the driver's alertness. A well-designed roadside device ought to lessen the harm, but it won't necessarily save a life or even a limb. And it certainly won't prevent the crash in the first place.

Trinity's legal antagonists vow to press their offensive. The safety results "are meaningless in relation to [the False Claims Act] case," lead plaintiffs' attorney Nicholas Gravante Jr. said in an ▶

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◀ e-mail. “Trinity did not test guardrails with the same dimensions as those that were on the road beginning in 2012. Trinity and the FHWA did not allow proper third-party inspection or monitoring of the tests performed, and the FHWA appears to now be applying a different set of testing standards to try to mask the fact that one or more tests performed was a clear failure.” The litigation, in other words, is nowhere near over. —*Paul M. Barrett*

The bottom line Guardrail manufacturer Trinity has to defend its product in court even though the government says it meets safety specs.

Climate Change

The Obama Plan for Keeping the World Cool

▶ New refrigeration technology will help, but poor nations balk

▶ “The chemical companies are charging a lot for the alternatives”

On April 20, negotiators will meet in Bangkok for a round of global talks about phasing out chemical coolants known as hydrofluorocarbons. Widely used in air conditioners, cars, and refrigerators, HFCs can trap thousands of times more heat in the earth’s atmosphere than fossil-fuel emissions. Retiring them has become a cornerstone of President Obama’s effort to limit climate change. “HFCs are pretty small in the grand scheme of things right now, but they have an explosive growth path,” says Todd Stern, the U.S. Department of State’s special envoy for climate change.

American chemical manufacturers such as **Honeywell** and **DuPont** see Obama’s push as an opportunity to build demand for a newer generation of coolants known as hydrofluoroolefins, which don’t have the greenhouse effects of HFCs. Ken Gayer, general manager of Honeywell’s fluorine products division, estimates the worldwide market for hydrofluoroolefins may be worth as much as \$8 billion a year. DuPont executives told investors in 2013 they expect HFC alternatives to generate \$300 million to \$500 million in annual sales for the company.

The new coolants cost “several

percent” to “several times” more than HFCs, Gayer says, but are more efficient as well as being climate-friendly. A study commissioned by the U.S. Environmental Protection Agency last year estimated switching to new coolants in car air conditioning adds about \$62 in production costs per vehicle. “This to us is a very good solution for the environment, a very good solution for our customers,” says Gayer. “It’s an area where everybody wins.”

Citing concerns about the cost and reliability of the latest refrigerants, developing nations led by India and Saudi Arabia have delayed any international agreement. India’s growing middle class demands air conditioning and refrigerators, and its government has called for public demonstration projects to prove the viability of the latest refrigerants. “It’s become a sensitive issue because the chemical companies are charging a lot for the alternatives,” says Durwood Zaelke of the Institute for Governance & Sustainable Development, a Washington advocacy group that supports moving away from HFCs. “You have some countries wondering if they are being charged a fair price.”

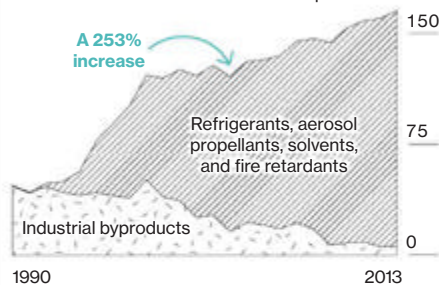
The talks are being conducted under the United Nations’ Montreal Protocol, a 1989 treaty governing the use of chemicals that deplete the ozone layer. They’re seen by some environmentalists as a test run for talks on a global UN climate agreement planned for December. “It would provide huge momentum for the broader climate negotiation,” says Paul Bledsoe, a senior energy fellow at Washington-based German Marshall Fund.

A 2014 UN report said the cost of accelerating the adoption of new coolants in poorer countries, including India and Saudi Arabia, could range from \$500 million to \$3.2 billion. At the annual Montreal Protocol conference in Paris last November, the U.S. and other developed nations promised \$508 million in aid over three years to help other countries switch to HFC alternatives. That’s probably not enough, says Arunabha Ghosh, head of the Council on Energy, Environment and Water, a think tank in New Delhi. “The general feeling is this transition will happen at one stage or another,” he says. “Is it worth investing in today’s alternatives, or is it worth waiting to see where the market settles?”

The relatively high cost of HFC replacements has boosted interest in

HFC coolant emissions in the U.S.

Million metric tons of carbon dioxide equivalent



DATA: U.S. ENVIRONMENTAL PROTECTION AGENCY

other alternatives, including propane, ammonia, and high-pressure carbon dioxide. That could threaten chemical makers’ hold on the cooling market, says Keilly Witman, a former regulator at the EPA who now advises grocers. “There’s no doubt the chemical manufacturers make an awful lot of money from these transitions,” she says. “When you only have a couple of sources, you’re at the mercy of what industry wants to charge.” —*Alex Nussbaum*

The bottom line The Obama administration is pushing other nations to adopt new coolants, a potential boon to U.S. manufacturers.

Elections

As Jacksonville Goes, So Goes Florida

▶ A mayoral race gives both parties a chance to test strategies for 2016

▶ “If I’d have had another week, I’d have had those 1,400 votes”

It’s been four years since Alvin Brown, a former Clinton White House staffer, eked out a victory in Jacksonville, Fla., to become the city’s first black mayor and the first Democrat to hold the office since 1991. Brown won by a margin of 50.4 to 49.6 percent. Now, with early votes already being cast in the city’s March 24 open mayoral primary, Republicans are mobilizing to make sure Brown doesn’t keep his job. Jacksonville is Florida’s largest city by population and makes up the entirety of Duval County. No Democratic candidate for president has carried Duval since Jimmy Carter in 1976, but it’s where President Obama won Florida in 2008 and 2012. In 2008, Obama won only 48.6 percent of the county, for a total of 202,618



votes. In 2012 he slid to 196,737 votes—but defeated Mitt Romney statewide by 74,309 votes.

The Florida Democratic Party and Republican Party of Florida have spent a combined \$3 million on the race so far. “Because Florida is so important to winning the White House, this has become a party deal,” says Bill Bishop, a Republican councilman who is running.

The GOP is putting most of its money on Lenny Curry, the former chairman of the state party, who was chairman of the Duval County Republican Party during the 2011 election. Jeb Bush was among his early backers, rolling out an endorsement in January. Brian Swensen, Curry’s campaign manager, says the 2011 race haunts him. Brown won after two Republican candidates knocked each other out of the first round. The last Republican standing, Mike Hogan, ran a Tea Party-powered jumble of a campaign. “I had five, six weeks to build a grass-roots operation,” says Swensen, who was brought in by the county GOP as a consultant to help Hogan. “If I’d have had another week,

I’d have had those 1,400 votes, and we’d have had a Republican mayor.”

Brown’s political career started with a job on Bill Clinton’s 1992 transition team. After a failed 1994 run for Congress, Brown returned to Washington to work on urban policy at the White House. In 2007 he joined Hillary Clinton’s presidential campaign as a policy adviser. In 2011, Bill Clinton recorded robocalls for Brown. This year, Brown has handled the Clintons gingerly. The former president appeared in mid-February at a private event sponsored by Brown’s Taking Jacksonville to the Next Level PAC. No photos were released. “Well, you know, the president supported me the first time I ran,” Brown says. “He supports me now. He’s well respected, a true leader when it comes to putting people back to work. I think, at the end of the day, people understand that relationship. He’s a personal friend. I worked in his administration. That’s why, when we did have the event, I made sure it was all about Jacksonville.”

Brown isn’t portraying his mayoral

race as a cause for Democrats. Brown declined to campaign for Obama in 2012, though he did vote for him, and declined to campaign for former Governor Charlie Crist when he ran as a Democrat against Republican Governor Rick Scott in 2014. In conversation, he often talks warmly about “Governor Scott.”

“In 2008, 2011, 2012—if there was a single common thread—it was a focus on turning out low-propensity African American voters,” says Steve Schale, the 2008 Florida director for the Obama-Biden campaign, who led the Democrats’ turnout push in Duval County that year. “The fact that some of these voters were touched in 2008, 2011, 2012, now 2015, a lot of that is helpful. Where I fall short is with people who say the outcome here means something for 2016. But there’s definitely a morale boost if Alvin wins.” —*David Weigel*

The bottom line The GOP is pouring resources into taking back Jacksonville’s mayoralty in hopes of gaining 2016 momentum.

B Edited by Allison Hoffman
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The Cybersleuth Who Saunas With Russian Spies



43

► As security-software makers choose sides, Kaspersky Lab takes aim at U.S.-backed hacking

► “Hey, this is the reality we’re in now”

Kaspersky Lab sells security software, including antivirus programs recommended by big-box stores and other U.S. PC retailers. The Moscow-based company ranks sixth in revenue among security-software makers, taking in \$667 million in 2013, and is a favorite among Best Buy’s Geek Squad technicians and reviewers on Amazon.com. Founder and Chief Executive Officer **Eugene Kaspersky** used to work for the KGB, and in 2007, one of the company’s Japanese ad campaigns used the slogan “A Specialist in Cryptography from KGB.” The sales tactic, a local partner’s idea, was “quickly removed by headquarters,” according to Kaspersky Lab, as the company recruited senior managers in the U.S. and Europe to expand its business and readied an initial public

offering with a U.S. investment firm.

In 2012, however, Kaspersky Lab abruptly changed course. Since then, high-level managers have left or been fired, their jobs often filled by people with closer ties to Russia’s military or intelligence services. Some of these people actively aid criminal investigations by the FSB, the KGB’s successor, using data from some of the 400 million customers who rely on Kaspersky Lab’s software, say six current and former employees who declined to discuss the matter publicly because they feared reprisals. This closeness starts at the top: Unless Kaspersky is traveling, he rarely misses a weekly *banya* (sauna) night with a group of about 5 to 10 that usually includes Russian intelligence officials. Kaspersky says in an interview

that the group saunas are purely social: “When I go to banya, they’re friends.”

Kaspersky says government officials can’t associate his company’s data with individual customers and that he hasn’t had to worry about increased pressure to demonstrate loyalty to Vladimir Putin. “I’m not the right person to talk about Russian realities, because I live in cyberspace,” he says.

Nonetheless, while Kaspersky Lab has published a series of reports that examined alleged electronic espionage by the U.S., Israel, and the U.K., the company hasn’t pursued alleged Russian operations with the same vigor. In February, Kaspersky Lab researchers released a remarkably detailed report about the tactics of a hacker collective known as the Equation Group, which has

◀ targeted Russia, Iran, and Pakistan, and which cybersecurity analysts believe to be a cover for the U.S. National Security Agency. Kaspersky Lab hasn't issued a similar report about Russia's links to sophisticated spyware known as Sofacy, which has attacked NATO and foreign ministries in Eastern Europe. Sofacy was reported on last fall by U.S. cybersecurity company **FireEye**.

While Kaspersky Lab is the most prominent cybersecurity business with close ties to the Russian government, that affinity with the country's spooks reflects a yearslong shift by security companies toward choosing sides. Most major security-software makers work with the U.S. in some capacity. Any government relationships can make a company's products harder to sell in a paranoid global marketplace, says Rick Holland, principal analyst of security and risk management for Forrester Research. "It's a challenge for any security company out there," Holland says. "What are your ties to government?"

Kaspersky Lab's ties dramatically increased after two waves of executive departures, say four of the former insiders. The first came in 2012, after Kaspersky scotched an IPO partnership with Greenwich (Conn.) investment firm General Atlantic. Afterward, Chief Business Officer Garry Kondakov circulated an internal e-mail saying that from then on, the company's highest positions would be held only by Russians, say two people who saw the e-mail. Board meetings, once conducted in English, were now in Russian. The company denies that the e-mail was ever sent.

In 2014 after a handful of senior managers, including Chief Technology Officer Nikolay Grebennikov and North American President Steve Orenberg, asked Kaspersky to consider appointing a new CEO and retaining only the chairmanship of the company, he fired them.

Chief Legal Officer Igor Chekunov, who regularly joins Kaspersky's banya nights, is the point man for the company's work with the Russian government, three of the insiders say. Since 2013 he has managed a team of 10 specialists who study data from customers who have been hacked and provide technical support to the FSB and other Russian agencies. The team can access data directly from any of the company's systems. While Kaspersky Lab's managing director for North America, Christopher Doggett, says its data are anonymous, two people familiar with

the technology say it can be altered to gather identifying information from individual computers and has been used to aid the FSB in investigations. Chekunov had no biography on the company website prior to a query from *Bloomberg Businessweek*. Spokeswoman Sarah Kitsos says he served as a policeman after working in the KGB's border patrol.

FireEye shows how these relationships work in the U.S. The company was guided early on by the CIA, which uses its technology and for years maintained a stake in the company through the agency's investment arm, In-Q-Tel. FireEye has revealed Chinese and Russian hacking but has yet to do a major report calling out spying by the U.S. Although FireEye CEO David DeWalt praised Kaspersky Lab's Equation Group report, he wouldn't say whether his company is researching the group. "Is it any mystery what origins they have and who probably fed them these information sources?" he says. "You look at all of that, and you just go, 'Hey, this is the reality we're in now.'"

In head-to-head tests, Kaspersky Lab's software still performs well against competitors. "The techies love us," Doggett says. But the ruble's slide will likely dent the company's 2014 earnings, which it posts in dollars online. More important, Kaspersky has struggled to win federal U.S. contracts.

"There's a cyber isolationism that's definitely emerging," says Holland, the Forrester analyst. "They have to overcome any perceived or actual alliances." —*Carol Matlack, Michael Riley, and Jordan Robertson*

The bottom line Popular security-software maker Kaspersky Lab has close ties to Russian military and intelligence officials.

Design

Japanese Engineers Reinvent the Wheel

- ▶ The Kondo brothers' bike parts reach peak performance—and price
- ▶ "We just wanted to know how far our technology would go"

Brothers Nobuo and Yutaka Kondo run **Kondo Machine**, a 30-employee shop that engineers specialized parts for **Rolls-Royce** jet engines and machines that make parts for **Toyota** cars. They also love to bike. You can see where this is going: The Gokiso wheels the Kondos have made out of titanium and carbon fiber provide what they say is an incomparably smooth ride. Spin 'em on a test rack at 18 mph, and the bike wheels take

Gokiso wheel



six minutes to come to rest, compared with about 90 seconds for a high-end, resistance-impaired competitor. But it's a level of quality few can afford: Each pair costs \$7,900. In four years, Kondo has sold 30 and about 1,000 of simpler models that go for less than \$3,300 a pair.

In Japan compulsive overengineering is producing beautiful industrial components and few consumer hits. Sharp has made a \$1,300 fridge that tries to distinguish itself by making clear ice cubes, as opposed to cloudy ones. Panasonic is selling an \$1,800 washing machine that estimates how much detergent you need after you enter the brand into an app and swipe your phone against a sensor on the machine (instead of, you know, reading the bottle). In an era where smartphones come with free step-by-step navigation apps, Pioneer is trying to sell a \$2,500 standalone GPS device that projects instructions onto the windshield of your car. "We're hoping it catches on," says Pioneer spokeswoman Hitomi Ishizuka.

Japan, which invented the Internet-connected mobile phone, last year imported 34 million of them and exported just 240,000. Alberto Moel, an analyst at portfolio manager Sanford C. Bernstein, says a big part of Japan Inc.'s problem is that engineering, not marketing, often drives product development. His take: "You made this stuff on the

expectation that your customers would pay more for it, without stepping back and asking whether they really would."

The Kondos say they weren't thinking much about sales when they started developing their bike wheels in 2009. Nobuo, the president of the family business, had just trounced younger brother Yutaka in an endurance race. Yutaka blamed the bike and took apart the rear axle. Sure enough, it had been partly crushed during the four-hour ride. Less than a year after the global financial meltdown, the younger Kondo had a lot of free time, so he spent about six months developing an axle that could remain completely straight, suspending it inside a protective sleeve that redistributes weight and absorbs shocks. "We just wanted to know how far our technology would go," his brother says.

Using a test bike rigged with rollers and sensors, Yutaka ran the wheels at speeds of up to 300 kph (186 mph), close to the top speed of Japan's bullet train. Then a durability test: 100 kph, 10 hours a day, for 100 days, a distance twice the earth's circumference. After all that, Nobuo says, the wheels still spun like new. The Gokiso has one-third less mechanical resistance than the next-smoothest wheel on the market, the brothers say, which means speeds 1 mph to 2 mph faster for most riders and crucial seconds shaved off pros' race times.

Marketing the most expensive bicycle wheels in the world is another matter.

◀ Over four years, the Kondos have sold only 30 sets of their top-of-the-line wheels

▶ Made with titanium and carbon fiber, the wheels have been tested for a distance of twice the circumference of the earth



In 2012, the Kondos hired amateur cycling champion Makoto Morimoto to work a lathe in their factory and use their wheels in races. Morimoto, known for his high-elevation biking, won one of Japan's steepest hill climbs

at a record pace last year, but few credited the wheels, according to Nobuo: "Everyone says, 'Of course he won, he's the king of the mountains.'" So the older Kondo brother, now 58, is contemplating one more marketing stunt: handing the company over to Yutaka and becoming a full-time cyclist himself. "I don't even have to win," he says with a wry smile. "If I just keep up, people will say, 'How the hell did that old man get so fast?'" —Jason Clenfield

The bottom line Two inventors found it easier to build \$7,900 bike wheels than to sell them—a classic case of Japanese overengineering.

Politics

The Many Hats Of Jim Messina

- ▶ The head of Clinton's main super PAC also advises Uber and Airbnb
- ▶ Startups seeking connections "consider him our silver bullet"

In December 2012, **Uber** had an urgent problem: Its drivers in Milan were being menaced by angry cabbies wielding tire irons. Chief Executive Officer Travis Kalanick consulted with investor Shervin Pishevar, the politically connected venture capitalist. Pishevar happened to know that Jim Messina, the campaign manager for Barack Obama's reelection, was celebrating the president's victory in Italy. As Messina recalls: "I was getting engaged and drinking my ass off."

Still, he took Pishevar's call at 2 a.m. in Italy, then called U.S. Ambassador David Thorne, who called Milan Mayor Giuliano Pisapia. City police began looking into the disputes. (Things aren't exactly friendly, though. In February a threatening sign was hung near the home of Uber's top executive in Italy.)

Since he took Pishevar's call, Messina, an in-demand Washington operative and head of Priorities USA Action, a super PAC aligned with likely 2016 Democratic presidential nominee



◀ Hillary Clinton, has become Silicon Valley's go-to government fixer. He's still working with Uber—he helped recruit fellow Obama campaign alum David Plouffe as its senior vice president for policy and strategy—and advises **Airbnb**, used-car market **Beepi**, and Pishevar's **Sherpa Ventures** while serving on the board of cybersecurity company **Vectra Networks**.

"We call him 'The Wolf,'" says Pishevar, a reference to the murder-cleanup consultant in *Pulp Fiction*, played by Harvey Keitel. "He's a mastermind in terms of political strategy."

Besides Plouffe, who joined Uber in August, Messina has been followed into tech by another Obama alum, former White House Press Secretary Jay Carney, who signed on with Amazon.com on Feb. 26. But unlike the others, Messina isn't quitting his day job. He says he plans to keep running the Priorities super PAC. While it isn't unusual for politicians to peddle their influence and then return to politics, the simultaneity is a potential conflict, says Fred Wertheimer, president of Democracy 21, a nonprofit that works to limit the influence of money in politics. "We live in a world where political operatives do all kinds of consulting, so it can get complicated," Wertheimer says.

Messina got his first immersion in tech early in the 2012 campaign, when he frequently swung through Northern California soliciting advice and support from executives such as Steve Jobs, Google Executive Chairman Eric Schmidt, and Salesforce.com CEO Marc Benioff. Messina was an outsider then; now he's a *consigliere* for startups that need help winning over legislators. "In the industries these companies are in, you have entrenched companies that wake up every day trying to put them out of business," Messina says. "The existing rules and regulations were not built for disruptive technology, and part of America's success has been allowing disruptive technology to soar."

The Valley has already been lucrative for Messina and his consulting firm, the Messina Group. When he started working for Uber, Messina received an undisclosed number of shares in the company, which was then valued at

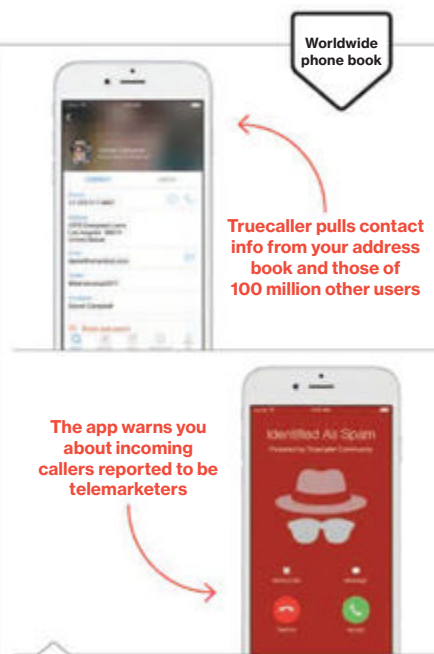
\$330 million. Uber's valuation is now 124 times higher—more than \$41 billion—meaning Messina's shares are potentially worth tens of millions of dollars. "It certainly helps to pay the rent," says Messina. He quickly adds: "I think about getting involved in things I really believe in." He wouldn't discuss compensation.

At Uber, Messina taught the combative Kalanick to frame his fight as a campaign and direct attention to the taxi industry's problems. With his and Plouffe's help, Uber won political battles in Virginia and Pennsylvania, though it still faces many obstacles at home and abroad. At Airbnb, Messina has worked with David Hantman, a former chief of staff to New York Democratic Senator Chuck Schumer, to fight legislation barring landlords and tenants from using apartments as makeshift hotels. For Beepi, which lets Californians buy and sell used cars online, Messina is navigating a maze of laws and introducing the company to regulators. He helped score a 48-hour's-notice meeting with California's secretary of transportation "that otherwise would have taken six months to set up," says Beepi CEO Alejandro Resnik. "We consider him our silver bullet."

Until 2016, Messina expects to spend most of his time in Washington. (His consulting firm uses three desks in Pishevar's San Francisco office.) After that? "I would someday love to live in San Francisco or Silicon Valley," he says. "Right now, I'm pretty committed to getting Mrs. Clinton elected."

—Brad Stone, with Joshua Green

The bottom line Obama campaign manager Jim Messina consults for tech companies while running Hillary Clinton's super PAC.



businesses, it's harder to find accurate information about people, especially since directories typically don't include cell numbers. "If you go to the White Pages and search for Alan, you'll never find the right Alan," says Truecaller co-founder Alan Mamedi. "That's where we're unique."

Mamedi teamed up with college buddy Nami Zarringhalam in 2009 to create the Truecaller app, which catalogs its 100 million-plus users and compares and compiles the names in their contact lists. The free app looks a lot like a standard smartphone address book, except that it's connected to everyone else's. Type a phone number, and up pops a name, head shot, and other contact info such as address, e-mail, and **Twitter** and **Facebook** handles. If you have the person's name but need her number, start typing and the app will narrow down the 1.6 billion numbers in its catalog.

Truecaller orders profiles based on contacts you have in common with the person you're looking for, so the John Smith who attended that one conference with you is likely to appear above all the others. Tap his profile, and the app will offer to connect you. Truecaller also helps block unwanted calls. The service has indexed numbers that users report as unwanted solicitors, and if one calls you, your phone displays the message "Identified As Spam" while you decide whether to pick up.

The company last year raised \$80 million in venture capital from investors including **Kleiner Perkins Caufield & Byers**, **Sequoia Capital**, and **Atomico**, the tech startup fund of ▶



Messina's Uber shares have risen 124-fold

Apps

A Little Black Book With 1.6 Billion Numbers

▶ Swedish startup Truecaller aims to create a global phone directory

▶ "Everyone wants to be where the successful entrepreneur wants to be"

The Internet has largely shoved aside the Yellow Pages. A Swedish startup called **Truecaller** aims to do the same to the White Pages and their online progeny. While a quick Web search can unearth the phone number and address of most



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Innovation

LiverChip

Form and function

The smartphone-size LiverChip Quantum B lets drugmakers test hepatitis B treatments on colonies of human liver cells infected with the virus, which is not found in other animals.

Innovators Linda Griffith and David Hughes

Ages 54 and 34

Professor of biological and mechanical engineering at MIT; chief technical officer at six-year-old medical-technology maker CN Bio Innovations in Welwyn Garden City, England

1.

Setup The LiverChip has 12 dime-size wells, each containing a colony of 600,000 infected liver cells arranged to model the organ's structure.

Background

Hepatitis B targets the livers of human hosts. Lab animals such as rats can't be infected with it.

Origin Griffith, a pioneer of organ-chip technology, licensed her model liver to CN Bio in 2012. The company's scientists then refined the chip to focus specifically on hep B testing.

LiverChip culture plate

Clients LiverChip's early users include European pharma companies Sanofi and Novartis.

Market The global market for similar cell cultures was about \$586 million last year, estimates BCC Research. Hughes wouldn't disclose LiverChip revenue.

Pneumatic dock

2.

Testing Bathed with a blood-like serum, each well of cells mimics the function of a complete liver. Sensors in the chip monitor each well while it's being treated.

Next Steps

Hughes says CN Bio plans to use LiverChip to expand into drug development. Despite the technology's strengths, it can't model side effects such as birth defects or cancer, says David Jacobson-Kram, a former Food and Drug Administration toxicologist who consults for drugmakers. The Defense Advanced Research Projects Agency has pledged \$63 million to Harvard and MIT to develop a chip that provides a fuller picture by linking facsimiles of 10 different organs. —*Oliver Staley*

◀ Skype founder Niklas Zennstrom. Mamedi wouldn't provide a valuation for the company but says he expects to top 300 million users by yearend. Martin Garner, an analyst at researcher CCS Insight, says Truecaller's growth and VC appeal are reminiscent of WhatsApp, the messaging service that Facebook acquired last year for \$22 billion, although Truecaller doesn't appear to pose the same kind of competitive threat to Facebook that helped boost WhatsApp's value.

The 65-employee company began to rake in funding last year after Facebook Chief Executive Officer Mark Zuckerberg started saying he expects mobile devices in fast-growing countries such as India to account for most of his social network's next billion users. More than 55 million Truecaller users are in India, where there's no comprehensive public telephone directory and many people use prepaid phones that are tough to track. "Everyone wants to be where the successful entrepreneur wants to be, and we were already there," Mamedi says.

One concern about crowdsourced information such as Truecaller's is privacy, says Jessica Ekholm, a research director at Gartner. "We're just at the tip of the iceberg of consumers' awareness of app security," she says, and growth could slow as more people worry about opening their contact lists to outsiders. Zarringhalam says the app has ample protections, with settings that let people limit who can see their data and show personal details only when permitted. Non-users get a message when someone wants to connect, and there's a button they can click to be delisted from the app. "You don't get content you shouldn't have access to," he says.

Truecaller faces competition from a multitude of ad- or subscription-based directory services that use data from phone companies and public sources. Mamedi insists they aren't as comprehensive as his crowdsourced directory, which he says will begin trying to make money later this year. He wouldn't discuss exactly how, but one possibility is fees for commercial listings. "We have a lot of ideas," Mamedi says. "We believe what we have will fly, but we don't want to rush it." —*Adam Ewing*

The bottom line Truecaller's crowdsourced phone book has \$80 million in funding and is on track to top 300 million users by yearend.

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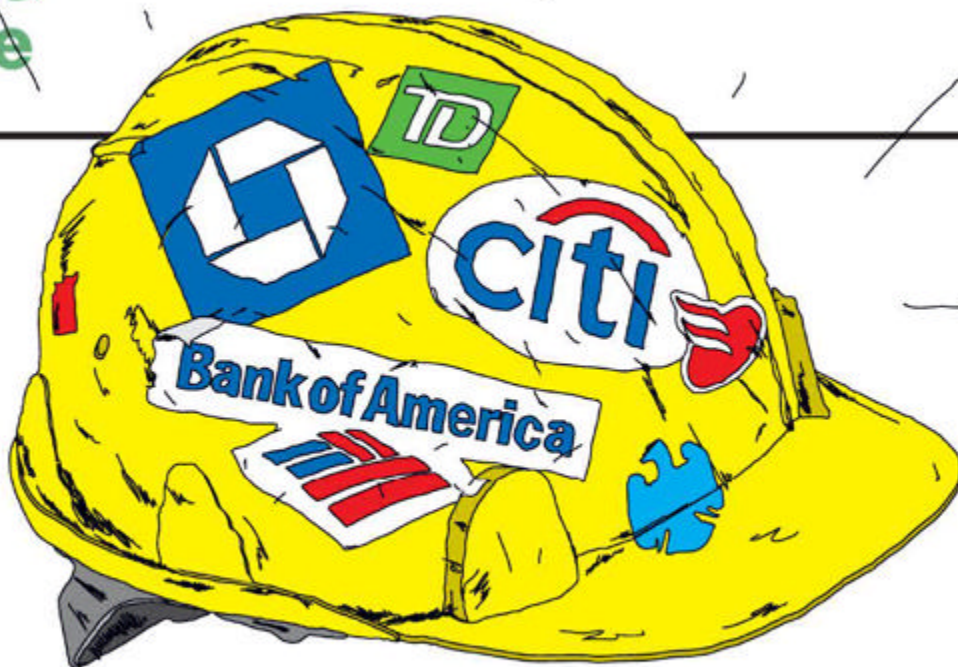
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Unions Try to Get Between Banks and Their Customers

► An international labor group brings its campaign to curb sales quotas to the U.S.

► “It’s important to have a fair relationship with the customer. They think we are a kind of thief”

Five years ago in Copenhagen, leaders from UNI Global Union, a federation that represents 20 million workers in 150 countries, approved a charter that they’re convinced can help avert another financial crisis.

The labor activists argued that by imposing sales quotas, banks had compelled their employees to sell customers products they didn’t need, with risks they didn’t understand. “We had many, many bank employees who had a crisis of conscience,” says Philip Jennings, who heads the umbrella group, based in Nyon, Switzerland.

UNI’s leadership drafted “sales and advice” provisions, designed to protect bank workers and consumers, and set about trying to get them into union contracts and industry agreements in Europe and South America. Now UNI is setting its sights on the U.S., where the banking sector is virtually union-free.

UNI wants bank workers’ responsibilities conceived as a duty to provide

conscientious advice to customers, rather than a duty to sell them as many products as possible. It wants fewer sales quotas, more protections for whistle-blowers, and better training. “It’s important to have a fair relationship with the customer,” says Angelo Di Cristo, an official with the Italian banker union FABI, a UNI affiliate. “They think we are a kind of thief.”

UNI’s global campaign has had mixed results. Brazilian unions last year negotiated an agreement with Madrid-based **Banco Santander**, which employs 49,300 people in Brazil, that labor leaders say has lessened pressure on workers to meet demanding sales targets. “Before, we had a great number

of complaints from the bank workers about moral hazards, about sales obligations,” says Rita Berlofa, a UNI leader in São Paulo.

In Europe, banks “don’t want to commit,” says Claudia Saller, a UNI policy officer based in Brussels who’s been trying to secure an industrywide agreement to limit sales quotas. “It could be an attack on their way of doing business, and they don’t want any interference with that.” Still, UNI points to successes in extracting Europe-wide commitments from Santander and **Barclays** to promote ethical sales practices. Barclays didn’t respond to requests for comment. A Santander spokesman in Madrid described its agreement, signed

Membership Drive
Share of the
U.S. workforce
represented by
unions, 2014

Construction

Manufacturing

Retail

14.7% 10.5% 5%

in 2011, as one of several measures taken to ensure its products are sold to the right customers. UNI is hopeful that negotiations between labor and **UniCredit**, Italy's largest lender, will yield a similar commitment by June. "Responsible sales is an important matter being discussed" with labor, says a spokesman for UniCredit.

UNI's goal of getting the big banks to sign agreements that would cover their workers worldwide remains elusive. "When we talk to them in Paris or London, they always say that management in the U.S. will never agree," says Elise Buckle, UNI's global policy coordinator for finance. The federation has been backing efforts spearheaded by the Communications Workers of America to unionize tellers, personal bankers, and call-center staff at U.S. banks.

Organizers claim 8,500 U.S. bank employees have taken a small step, such as joining a conference call or signing a petition, or a larger one, such as attending a rally outside one of Citigroup's Manhattan offices last year. CWA and its allies plan to kick off the next phase of their campaign, including a call to curb quotas on the number of loans, credit cards, or mortgages sold each day, at an April rally in Minnesota.

Michael Lewis, a worker at a Wells Fargo call center in Arizona, welcomes UNI's support. "I love that they're trying to prevent the banking industry from becoming the fast-food industry, like it is now in America—poor wages, a lot of stress," he says.

Michael Moebs, chief executive officer of economic research firm Moebs Services, argues that the unions' focus on quotas is outdated. "It just doesn't make good business for a bank to put tremendous pressure on its employees anymore," he says. Mike Townsend, a spokesman for the American Bankers Association, says, "Banks are committed to a culture of integrity and credibility and fostering a fair and ethical work environment is a vital part of that."

Erin Mahoney, an organizing

coordinator at CWA, says the union is invested in organizing bank workers to protect its existing members, who are mainly in government and the telecom and airline industries. "We could bargain a contract that has a 5 percent raise for our members," she says, "but if their home is foreclosed on, or their grandmother has been pushed with three different credit cards, that affects them, too." According to the Bureau of Labor Statistics, only 1.6 percent of employees in finance are represented by a union. They're targeting "a group of workers who do not feel as if unions traditionally represent them," says Gary Chaison, a professor of industrial relations at Clark University in Worcester, Mass. "It'd be much easier to organize a manufacturing plant."

—Josh Eidelson, with Francisco Marcelino and Nick Leiber

The bottom line A global union's campaign to ease sales pressure on bank workers is targeting the U.S.

Arbitration

Bank Customers May Get Their Day in Court

▶ The CFPB takes aim at contract clauses that bar class-action suits

▶ Limits "would go a long way toward keeping the big banks in line"

Mandatory arbitration clauses were created by corporate lawyers about 15 years ago and buried in the fine print of credit card contracts and checking account agreements. But they may not live much longer following the March 10 publication of a three-year study by the Consumer Financial Protection Bureau. The 728-page report confirmed what consumer advocacy groups have long argued: Mandatory arbitration doesn't much help customers but does prevent expensive lawsuits against banks. The bureau was required to complete the report under the Dodd-Frank Act prior to issuing new regulations. "Now that our study has been completed, we will consider what next steps are appropriate," said CFPB Director

Richard Cordray in a statement.

The clauses require customers to use arbitration, not the courts, to resolve disputes and waive their right to be part of a class-action case. The CFPB could ban them outright in consumer finance contracts or just do away with the class-action waivers.

The report's findings presage a pitched battle between the consumer agency and business groups, notably the U.S. Chamber of Commerce, which views arbitration as a way to thwart avaricious plaintiffs' lawyers. The changes won't happen overnight. The rule-making process—and the fight with Wall Street—could drag on for years.

The bureau can count on supporters who have successfully fought off efforts to defang it since its creation in 2010. Those include Senator Al Franken. The Minnesota Democrat has for years railed against forced arbitration clauses not only in consumer finance agreements but also in employment, mobile phone, and cable-TV contracts. Restrictions on arbitration "would go a long way toward keeping the big banks in line and toward making sure that justice is available to consumers who get swindled," Franken told reporters on March 11.

Twenty-eight of the 50 largest banks by domestic deposits, including **JPMorgan Chase** and **Wells Fargo**, require checking account holders to submit disputes to arbitration, according to a 2012 study by Pew Charitable Trusts. Of the next group of 50 banks, 30 percent do so. Richard Hunt, president of the Consumer Bankers Association, called arbitration "mutually beneficial" to all parties in a March 10 statement.

Deepak Gupta, a lawyer who argued a case challenging arbitration before the Supreme Court in 2011 and later joined the CFPB as an enforcement attorney, says the real reason companies are wedded to arbitration is not that it's fast and cost-effective but that it suppresses claims. Gupta, who's now in private practice, says most customer claims against banks involve small sums of money so people don't bother to seek redress, by arbitration or any other method. And since they're barred ▶

"What this report shows is not that claims go to arbitration but that they simply go away"

Health Care

Finance

3.8% 1.6%

◀ from joining class actions, they can't band together to make it worth the lawyers' fees.

In its report, the CFPB noted that there were just 52 arbitration claims under \$1,000 in 2010 and 2011, and consumers won relief in just four of them. Says Gupta: "What this report shows is not that claims go to arbitration but that they simply go away."

Alan Kaplinsky, an attorney with Ballard Spahr who helped pioneer the use of arbitration clauses in financial contracts, counters that consumers resolve claims in other ways. They call the company to complain. They go to the Better Business Bureau. "That's why you don't see a heck of a lot of arbitration or litigation when there's a clause," he says.

The CFPB study found that over a five-year period contracts not covered by arbitration resulted in \$2.7 billion in class-action settlement payments to more than 160 million people. Kaplinsky says that since the vast majority of class-action cases go nowhere—a fact the CFPB noted in its report—this route to relief is overhyped. About 18 percent of that \$2.7 billion went to attorney fees.

Myriam Gilles, a professor at the Benjamin N. Cardozo School of Law, argues that class-action litigation has an important "halo effect." In the report, the CFPB highlights how a wave of class-action suits revealed that banks were manipulating checking account transactions to maximize overdraft fees, a multibillion-dollar revenue source. In 2010 a court awarded \$203 million in damages in one prominent case involving Wells Fargo, prompting the bank and many of its rivals to revise their overdraft policies.

Following publication of the CFPB report, the Chamber of Commerce Center for Capital Markets Competitiveness, which represents financial-services companies, issued a statement accusing the CFPB of

"trying to protect plaintiffs' lawyers." There's no question trial lawyers were pleased by the study's conclusions: The American Association for Justice, a lobbying group that represents the profession, praised the study for documenting "denied justice to countless victims of Wall Street's unscrupulous behavior."

In congressional hearings last year, Elizabeth Warren, the Harvard law professor who helped set up the bureau and is now a Democratic senator from Massachusetts, pressed CFPB Director Cordray repeatedly to get the study done. It's not new terrain for her. Warren criticized forced arbitration in an article published seven years ago. Banks "can break the law," she wrote, "but if the amounts at stake are small—say, under \$50 per customer—few customers would ever bother to sue." In that same article, she proposed the creation of what became the CFPB.

—Carter Dougherty

The bottom line The CFPB could ban mandatory arbitration clauses that discourage consumer claims against banks.

Investing

Money Management Glitters at Goldman



▶ Improved returns boost profit at the company's smallest division

▶ "When something gains momentum, you want to really keep pushing it"

After tripling in size in the eight years through 2007, **Goldman Sachs's** money management business stumbled during the financial crisis. One hedge fund, Global Alpha, lost 40 percent in 2007, and another had to be rescued by the bank. Some pension funds pulled their money out. The bank's mutual funds underperformed the average of similar funds for a three-year period ended in 2010. Five different men ran the division in the span of 12 months.

Today there are signs of a turnaround. Since **Eric Lane joined Timothy O'Neill** as co-head of the division at the end of 2011, mutual fund performance has improved, and assets under management have grown to more than \$1 trillion. The unit accounted for

"Trends in markets have a tendency to go too far one way or the other, and clearly the pendulum is swinging in favor of passive"

17 percent of Goldman's revenue and 11 percent of pretax profit last year, up from 10 percent and 5 percent in 2009. O'Neill and Lane say annual growth in

revenue will remain above 10 percent for the foreseeable future. "Lloyd always believed in asset management and wealth management as a key component of Goldman Sachs," says O'Neill, referring to Chief Executive Officer Lloyd Blankfein. "And when something gains momentum, you want to really keep pushing it."

Still, investment management is Goldman Sachs's smallest division, generating \$6.04 billion in revenue last year. Comparable units at both **Morgan Stanley** and **Bank of America** produced three times as much. Both those banks bought retail brokerages (Smith Barney and Merrill Lynch, respectively) in 2009. Goldman Sachs, with its tradition of focusing on the ultrawealthy, has steered clear of the retail business. Bank investors like money management businesses because they're more stable and predictable than stock and bond trading. So while Goldman Sachs's profitability is higher than that of rivals with more mass-market appeal, its stock trades at a smaller price-earnings multiple.

Lane, 40, and O'Neill, 62, say they expect the division to grow faster than most competitors. Goldman Sachs Asset Management, which produces about half of the unit's revenue through its mutual funds and by running portfolios for large investors such as pension funds and insurance companies, will increase revenue by an average of 10 percent a year, they say. The other half of the business, private wealth management, which serves individuals who have an average of more than \$40 million with the bank, will grow faster.

To improve mutual fund performance, O'Neill and Lane have emphasized the importance of being consistently above average—not usually a priority at a company that prides itself on big wins. Their reasoning is that mutual fund investors favor managers who dependably outperform over those whose returns soar and dive. "People in this business always want to be in the top decile, and that's a laudable goal. But mean reversion says that if you're in the top decile, you're likely going to be in the bottom decile," O'Neill says.

52

Number of arbitration claims under \$1,000 in 2010 and 2011—only four customers won relief

“That’s not saying that we’re accepting mediocrity. We’re playing for the long run here, the 3-, 5-, 10-year track records, and people may underestimate how detrimental to clients volatility in performance is.”

For the five years through 2014, 80 percent of the company’s mutual funds were in the top half of their categories on an asset-weighted basis, according to Morningstar. *Barron’s* named its U.S. equity funds the best of 2014.

Goldman Sachs missed out on the move by investors from active managers to index funds and exchange-traded funds, which seek to match the returns of a market benchmark. While Goldman Sachs bought a firm last year that pursues so-called smart beta strategies, a variation on index investing, O’Neill and Lane say they aren’t interested in passive products. “Trends in markets have a tendency to go too far one way or the other, and clearly the pendulum is swinging in favor of passive,” O’Neill says. Simply following benchmarks based on market value, like the Standard & Poor’s 500-stock index, “is a potential bubble machine.”

The bank also wants to do more lending to rich customers. Often backed by art or planes as well as commercial real estate or stock, the loans offer cheap money to the clients and additional revenue to the bank. Goldman Sachs has room to grow in this business: Last year, **J.P. Morgan Asset Management** had more than \$100 billion in such loans outstanding. While Goldman Sachs increased lending more than 50 percent last year, its total is still only \$17 billion. That probably will double over the next few years, according to Lane. “We’re seeing a lot of appetite,” he says.

O’Neill and Lane say reaching their targets ultimately will depend on maintaining improved performance—a challenge when studies regularly show that almost no fund managers consistently beat their benchmarks. “Eric and I are focused on improving the investment culture and therefore performance,” O’Neill says. “Whatever success we’re having is directly related to that.”

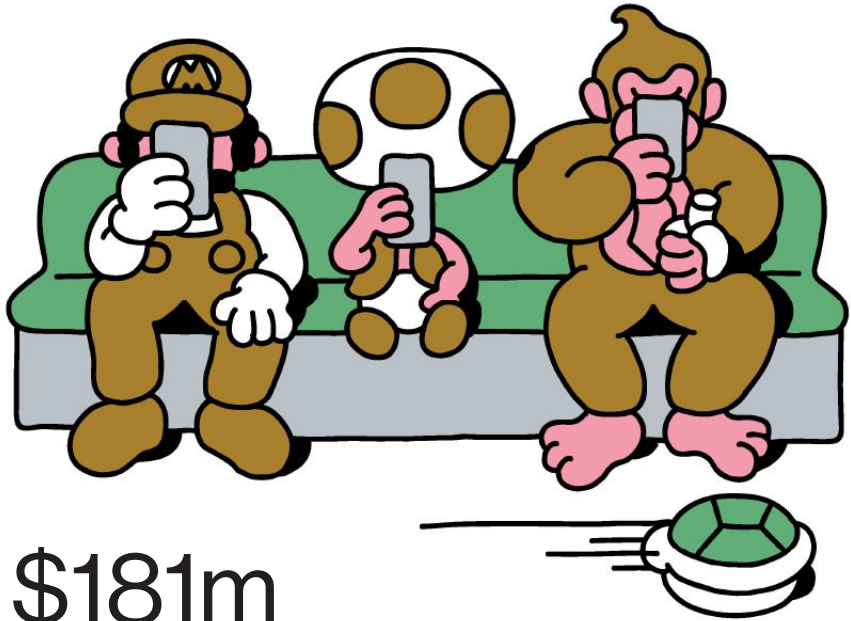
—Michael J. Moore

The bottom line The heads of Goldman Sachs’s money management unit say it will maintain growth of more than 10 percent a year.

B Edited by Cristina Lindblad and Eric Gelman
Bloomberg.com

Bid/Ask

By Kyle Stock



\$181m

Nintendo and DeNA team up. The Japanese companies are each spending 22 billion yen to buy each other’s stock as part of a partnership to develop video games. DeNA specializes in apps and mobile games, areas of the digital landscape that the console maker has been reluctant to enter. Nintendo, meanwhile, will let DeNA deploy its iconic characters in its iOS and Android offerings.



\$4b

Life Time Fitness goes private. A consortium of private equity firms led by Leonard Green & Partners and TPG Capital took the gym operator off the Big Board.

\$2.8b

Alfa plugs into Turkcell. The Russian telecom offered to buy a 14 percent stake in Turkey’s largest mobile phone operator. The deal will get a close look from Turkish regulators.

\$800m

A. Schulman buys Citadel Plastics. The acquisition gives Ohio-based Schulman a range of new hard-plastic products used in cars, appliances, and airplanes.

\$615m

Scripps Networks Interactive moves into Poland. The company bought a controlling stake in TVN, which operates broadcast, cable, and satellite channels in Poland.

\$610m

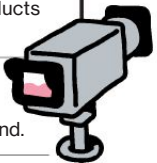
Berkshire Property extends its reach. The company bought a 340-unit apartment building on the outskirts of Portland, Ore., plus 10 other buildings in Atlanta, Tennessee, and Texas.

\$389m

Microsemi buys Vitesse Semiconductor. Both make computer chips in California. Microsemi focuses on the military, Vitesse on companies like Hewlett-Packard.

\$3.7m

A vintage Jag zooms off the block. A model D-Type from 1955, one of only 54 made, sold at the annual classic car auction in Amelia Island, Fla.





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55



STOCK (33)

How to Invest On the Edge

With markets at record highs, and some bond yields negative, ordinary investors have an advantage

By Peter Coy

Pigs still can't fly and hell hasn't frozen over, but interest rates have gone negative, and that's weird enough. In early March, about a quarter of the debt issued by euro zone governments traded with negative yields. On March 9, six-month Germany Treasury bills—*Unverzinsliche Schatzanweisungen*—were auctioned to yield an annual rate of -0.22 percent. This means that if you buy a German bill and hold it to maturity, you won't get all your money back. And Germany is having no trouble finding investors willing to accept those terms.

Keep those *Unverzinsliche Schatzanweisungen* in mind as you peruse this issue for ways to make money. Whether it's oil futures or oil paintings, each investment opportunity competes with other investment opportunities. When the German government gets away with paying negative interest, it's a sign that investors don't think they have better options. If they did, they would be putting their money into them. After a long, strong rally in the major world markets, it's time to lower your expectations for growth.

On the bright side, individuals have a big advantage over the pros at a time like this: They don't need to put up with negative rates, because they don't have millions of dollars in need of short-term safekeeping. And they don't have to report their results quarterly, so they can tune out the din of conflicting advice and focus on the long run. While the pros worry that healthy economic growth will hurt stocks in the short run by encouraging the Federal Reserve to raise interest rates, ordinary investors can hope that growth will result in more jobs,

increased spending, higher corporate profits—and higher stock prices.

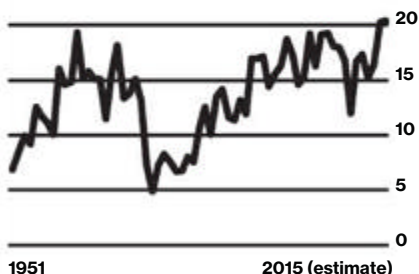
Easy money from the Fed and other central banks has been rocket fuel for stocks and bonds. An investment in the Standard & Poor's 500-stock index has returned almost 23 percent a year since the low of March 9, 2009, including reinvested dividends. "That's stupendous," says Michael Hartnett, chief investment strategist for Bank of America Merrill Lynch Global Research. "It cannot continue indefinitely."

Markets are on edge as Fed policymakers deliberate over when to start raising the federal funds rate, which has been at 0 to 0.25 percent since December 2008. "I'm still a longer-term bull, but this year is going to be volatile," says James Paulsen, chief investment strategist for Wells Capital Management. "We might well have a 10 percent to 15 percent correction in U.S. stocks." To Paulsen, one little-

noted warning sign is that the median price-earnings ratio for U.S. stocks set a record last year—and is

Stocks Are Pricey

Median (not average) price-earnings ratio for U.S. stocks*



probably higher now (chart). He views the median p-e as a better valuation measure than the more commonly cited capitalization-weighted p-e, which is heavily influenced by the price movements of the biggest companies.

Stocks could survive higher interest rates if brisk economic growth boosts earnings. Sharmin Mossavar-Rahmani, chief investment officer for Goldman Sachs's Investment Strategy Group, says tightening by the Federal Reserve doesn't always lead to a recession, and even when it does, stocks rise for an average of 18 months after the tightening begins. Stocks do really well before it begins (like now). "Over the past six tightening periods since 1980, the S&P 500 has returned 23.5 percent on average in the nine months prior to the first rate increase," Scott Miner, global chief investment officer for Guggenheim Partners, wrote in February.

"We think the cycle does have some time to run," agrees Russ Koesterich, chief investment strategist at BlackRock, the world's largest asset manager. He says the most vulnerable parts of the market are hot sectors such as biotech and social media, and safe "bond substitutes" such as utility companies and real estate investment trusts. "What's more reasonable is what's in the middle," he says—namely sectors that benefit from stronger economic growth, such as consumer goods and finance.

Those 23 percent annual returns are most likely a thing of the past, but there's still some upside left in the markets. Just be glad your little fortune isn't tied up in *Unverzinsliche Schatzanweisungen*. **E**



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The Old Guard Gets Its Algorithm On

Vanguard and Charles Schwab follow startups into the robo-adviser race
By Margaret Collins

58



Throughout 2012, John Petrosky kept hearing about a potential financial crisis in Europe. The Houston father of three remembered the losses he'd suffered in 2008, when the U.S. system was on the brink of collapse, and got scared. He pulled money out of the markets—only to miss big gains in 2013.

"I just need protection from myself," says Petrosky, 42. In September 2013, he decided to let others make portfolio decisions for him. Opposed to the high fees of traditional financial advisers, he was a natural candidate for a robo-adviser, one of the booming online services that offer

automated investment management via software. They pick assets and allocations by algorithm and keep costs low. But Petrosky didn't sign up with Wealthfront or Betterment, the two startups best known in the space. He turned his money over to Vanguard.

The \$3 trillion behemoth in Valley Forge, Pa., has joined the robo-advisory race—and so has \$2.46 trillion Charles Schwab, with a product called Schwab Intelligent Portfolios that was introduced on March 9. They're reacting to the explosive growth of automated investing startups and legitimizing the Silicon Valley argument that software can guide

How the Robots Stack Up

Company	Wealthfront	Betterment	Vanguard	Charles Schwab
Minimum investment	\$5,000	None	\$100,000	\$5,000
Fees for service	0%–0.25%	0.15%–0.35%	0.3%	0%
Assets under management	\$2 billion	\$1.6 billion	\$3 trillion	\$2.46 trillion
Features	Helps some clients boost returns with "tax-loss harvesting"	Helps users avoid wash sales if they withdraw money and have regular deposits set up	Hybrid software/old-school service mixes online tools with the ability to call an adviser	Offers choice of more than three dozen automated portfolios with up to 20 asset classes

Financial advisers typically charge 1 percent to 2 percent of assets. It may not sound like a lot, but these costs compound over time, costing investors billions.

people's investments better and more cheaply than flesh-and-blood advisers.

Vanguard, the world's largest mutual fund company, has been testing a way to bring low-cost investment advice to the masses since 2013. Its pilot, Vanguard Personal Advisor Services, has a minimum investment of \$100,000, which the company plans to lower to \$50,000 when the service is rolled out broadly later this year. A hybrid between robo-advisers and traditional wealth managers, it uses software as well as human interaction. "You shouldn't have to have \$1 million to get very sophisticated, tax-efficient advice," says Bill McNabb, Vanguard's chief executive officer.

Petrosky says he likes that he doesn't have to pick his funds or the maturity of bonds. His adviser in the Vanguard pilot does it for him using technology and phone conversations, and the company keeps his portfolio in line with his preferred allocation of 60 percent equity and 40 percent fixed income. Petrosky pays a fee of only 0.3 percent of assets, compared with the 1 percent to 2 percent that traditional advisers typically charge.

Schwab's offering is available to people with at least \$5,000 to invest. There's no fee associated with the service beyond the cost of the exchange-traded funds clients are invested in, including Schwab's, according to Naureen Hassan, who heads the service. Customers must have a cash allocation, from 6 percent to almost 30 percent of assets.

Tensions between the startups and industry titans bubbled over in early March as Wealthfront CEO Adam Nash criticized Schwab's offering in a blog post, particularly for its cash allocation. Schwab countered with its own post, blasting the robofirm for trying to build a moat around itself.

Wealthfront and Betterment started in 2011 and 2010, respectively. They made early inroads with millennials, who are generationally inclined to trust algorithms and put less of a priority on face time with advisers. Users go to a Web page or mobile app to answer questions about assets and risk tolerance and then let the computer do the work. Their money goes into inexpensive index funds or ETFs that seek to replicate the performance of a benchmark such as the Standard & Poor's 500-stock index. The investments usually have lower fees than funds for which managers try to beat the market.

"At the start there was a lot of skepticism as to whether people would trust their money to an automated service," Nash says. "Then we hit \$1 billion last year in about two

and a half years of existence." Wealthfront crossed the \$2 billion threshold in February.

The conversation has shifted from disbelief to a feeling of inevitability that robo-advice is part of the future, says Jon Stein, CEO of Betterment, which has attracted more than \$1.6 billion in assets. Although only 6 percent of affluent investors use an automated manager, about 17 percent of people younger than 35 do, according to a February survey by research firm Spectrem Group.

"By 2011, I was pretty much done with advisers and their ability to beat the market," says Josh McFarland, 37, who invests the bulk of his portfolio with Wealthfront. McFarland, who with his wife was an early employee of Google from 2003 through 2008, says his investments when managed by an adviser were too aggressively allocated in sectors such as bank stocks that were hit hard during the financial crisis. He switched to another professional who probably was too conservative, keeping too much in cash while charging a 1 percent annual fee, McFarland says. Now he has more than \$1 million invested through Wealthfront.

Vanguard is targeting baby boomers with its program. The company expects the group to increasingly seek help managing their savings through retirement. Vanguard's customer loyalty and the flood of money it's been attracting make it a force to be reckoned with in low-cost investment advice, says Alois Pirker, research director in the wealth management practice at Aite Group. Vanguard saw \$33 billion in new money in January, the most of any month in its 40-year history. About \$10 billion of its total assets are in the robo-advisory pilot.

The biggest asset managers have the resources to invest in technology. Midsize advisory firms Raymond James and Edward Jones say investors are still best served by advice from a person. "Do-it-yourself investors, aided by algorithms or the Internet, will have a tough time staying the course through a full market cycle," Jim Weddle, managing partner at Edward Jones, said via e-mail. The firm has no plans to add a roboservice.

"The revolutionary change that the little robo-adviser firms have provoked is that they challenge the price of advice," Pirker says. "Now the big firms have to justify their costs or lose the client."

Some people gravitate to automation, but most prefer a combination of technology and in-person guidance—if they can get it at a fair price and from someone they trust, says Chris Brown, co-founder of Hearts & Wallets, which conducts research on investor behavior.

For Petrosky, Vanguard's track record of providing low-cost investments that perform over the long term gives him confidence in the program. His portfolio has seen an annualized return of 10.9 percent since his September 2013 start, he says. "I trust the fact that they have my best interests in mind." **B**



We ♥ Charts

Our reporters spend a lot of time crunching numbers. We asked a few of them to help make sense of the markets



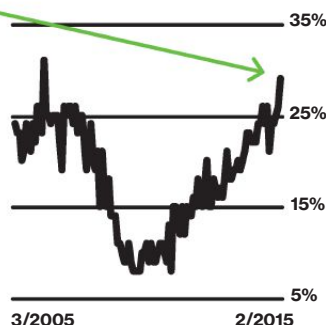
Joe Weisenthal

Help Wanted!

The number of small businesses having a hard time filling job openings is at its highest level in almost a decade.

This is a clear sign of economic recovery and maybe that wage hikes are on the way.

"Hard to fill" rate

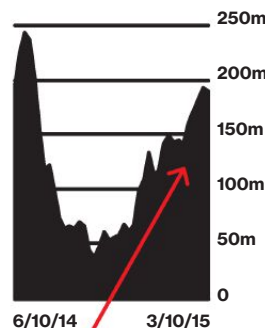


DATA: NATIONAL FEDERATION OF INDEPENDENT BUSINESS

Matthew Phillips

What's Next for Oil

Barrels accumulated by investors using Brent oil futures to bet that prices will rise



Investors use futures to bet on the price of oil.

Bets by hedge funds and other speculators are a sign of where the market is heading, and they sometimes move the market.



Nick Summers

The Simplest Chart in This Issue

Federal minimum wage



The federal minimum wage has been flat since 2009, at \$7.25 an hour.

DATA: U.S. DEPARTMENT OF LABOR

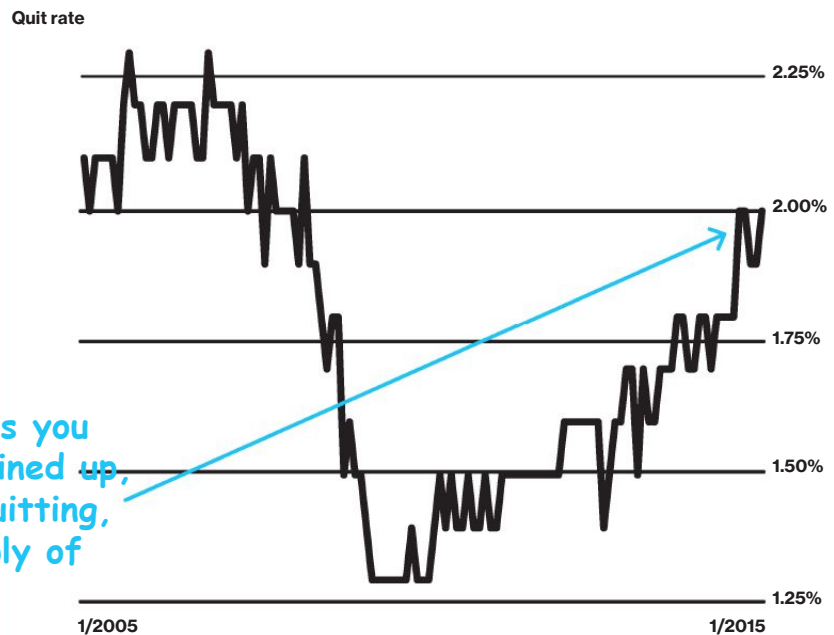
Some states—and even Wal-Mart—are setting higher wage floors. But until the national minimum increases, millions of Americans will be kept from fully participating in the economy.



Alex McIntyre

Quitters Never Often Win

The "quit rate" measures the percentage of workers who voluntarily leave their jobs each month.



DATA: U.S. BUREAU OF LABOR STATISTICS

You might not quit unless you have something better lined up, so if more people are quitting, it's a sign that the supply of good jobs is growing.

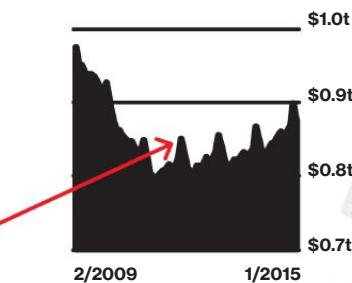
61

Mark Glassman

Something Borrowed

Revolving consumer credit outstanding

As the labor market improves, Americans are returning to an old habit: charging it. While credit card debt hasn't climbed to 2009 levels, it's bouncing back. The peaks coincide with holiday seasons.



DATA: FEDERAL RESERVE



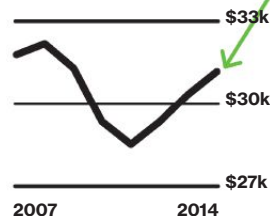
When people are comfortable enough to start charging more, that's generally a good sign for the economy, which depends on consumer spending.

Nina Glinski

The Good Kind of Wedding Drama

Average wedding cost, adjusted for inflation

Wedding spending is at a five-year high.



DATA: THEKNOT.COM

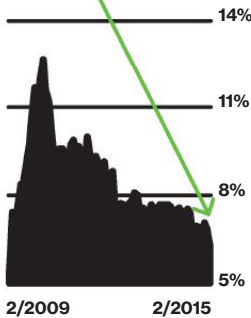
This is industry data, so take the amounts with a grain of salt—but the trend suggests that American couples are finding their economic footing after the recession.



A Bloomberg formula (based on factors including industrial production and retail sales) shows China's 2015 GDP growth slowing, to 6.28 percent.

Joe Weisenthal China's Lull

China Bloomberg monthly GDP estimate, year over year

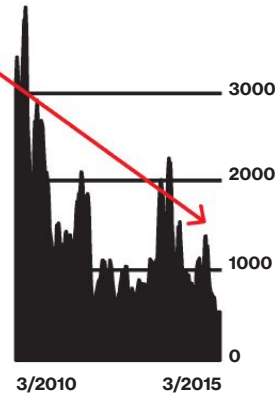


For much of the world, Chinese growth is crucial. If you sell commodities to China, you worry about the country slowing down. And that's exactly what's going on.

This index tracks the price of transporting raw materials by sea. One can see a gradual, though spiky, decline in the cost of shipping.

Bryant Urstadt Pondering Baltic Dry

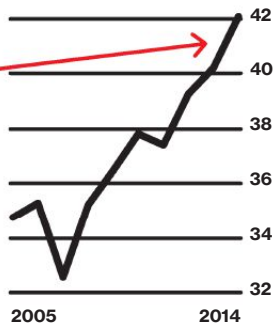
Baltic Dry Index



That could simply mean that more ships are on line. Or it may describe a general decline in the world's appetite for raw materials, implying slower growth from manufacturing nations, especially China.

Drake Bennett Oink, Oink

China swine consumption, kilograms per capita



DATA: U.S. DEPARTMENT OF AGRICULTURE

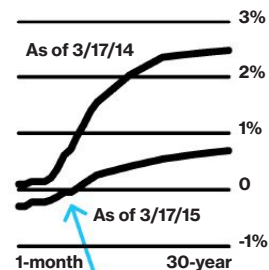
With a growing middle class, China is consuming more pork.

Increased meat consumption will buoy the price of corn and soybeans—animals eat more of them than people do—and maybe boost companies tied to farming, such as Monsanto, John Deere, and DuPont.

Economic uncertainty around the world has increased investors' demand for safe places to put their money. They're so eager to buy German government bonds that they're willing to accept negative yields—paying Germany for the privilege of lending it money.

Joe Weisenthal Germany, Subzero

German sovereign yield curve



It's not just a short-term thing: German debt maturing in as much as seven years carries a negative yield.

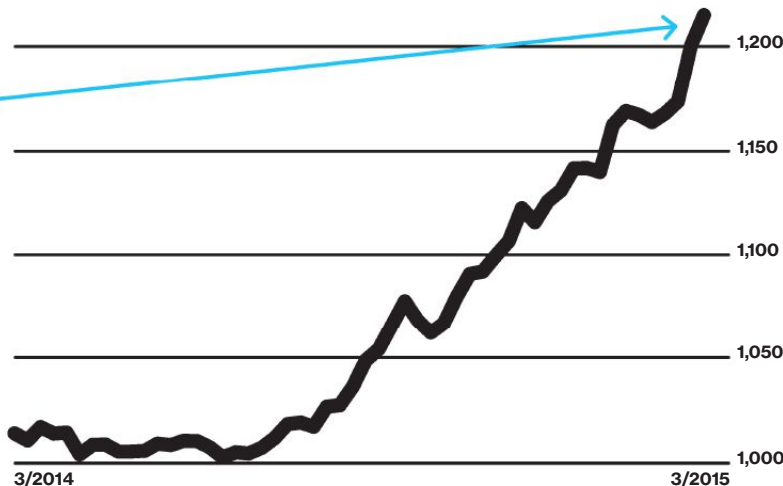


Kyle Stock

A Dollar's Got Two Sides

Bloomberg Dollar Spot Index

Against a basket of 10 foreign currencies, the dollar buys 20 percent more than it did a year ago.



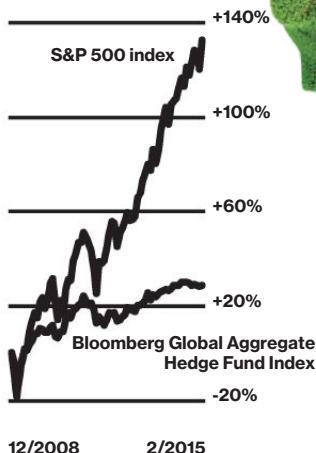
The strong dollar is great for American travelers, bad for big U.S. exporters. Companies in the S&P 500 get almost half their revenue outside the U.S.

Bryant Urstadt

A Hedge Fund Hedge

Change since 2008

This is a familiar chart on Wall Street, showing the epic underperformance of hedge funds against stocks in recent years.



I look at it differently than most. We all hate hedge funds, blah blah blah. But they tend to do better when stocks lose value. A long period of trailing the market suggests to me that hedge funds may be due for a comeback, following the principle of reversion to the mean.

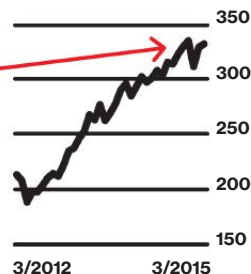


Max Abelson

Wall Street's Crocodile Tears

S&P 500 Financials Sector Index

Financial-sector stocks have returned 62 percent in three years. That's better than the S&P 500 index.



In the industry, the only thing more satisfying than making money is complaining about how hard the banking life has become. So many new rules, and such little gratitude! Don't buy it; Wall Street is doing fine.

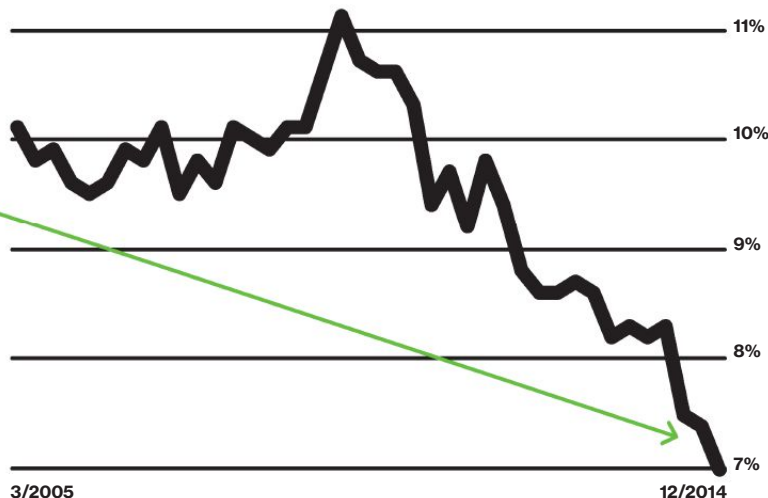




It's harder to find a place to rent in the U.S. than at any time since 1993.

Karen Weise No Vacancy

U.S. residential rental vacancy rate



DATA: U.S. CENSUS BUREAU

People have damaged credit scores from the recession. Wages are stagnant. Mortgages are more difficult to get. All that makes it harder to buy homes, and increased the demand for rentals.



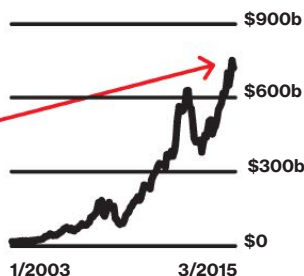
64



Can Apple become the first \$1 trillion U.S. company? It still has \$250 billion to go—as much as IBM's and McDonald's market value put together.

Nick Summers The Almighty Apple

Apple market value

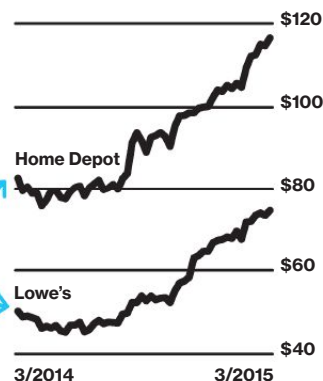


But in Apple's most recent quarter, profit rose 38 percent, to \$18 billion. That suggests the company has found a way to defy the law of large numbers.

Home improvement retailers have hammered together a string of handsome returns, thanks to a bullish housing market. Home Depot and Lowe's are getting increased business from contractors and logging more large purchases of appliances, windows, and flooring.

Kyle Stock Fixer-Uppers

Stock price

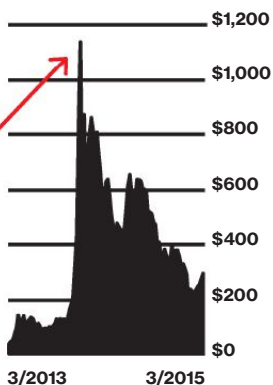


Those are signs that homeowners have cash to spend—and that they once again see their homes as good investments. Hello 2006!

Joshua Brustein

Remember Bitcoin?

Dollars per Bitcoin



The virtual currency's value in dollars has fallen by two-thirds since November 2013.

The recent drop could be telling us that Bitcoin is a fad whose time has passed. But its value is still up sixfold over the past two years, so maybe it's not dead yet.

Evan Applegate

Almond Joy

Almond price per pound on an Indian commodities exchange



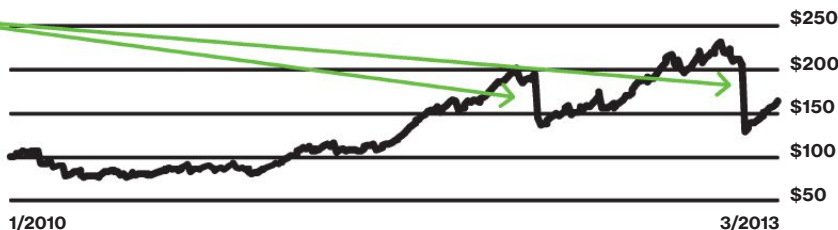
Almond prices are at record highs.

Eighty percent of the world's almonds come from California, which is suffering an extreme drought. If you need me, I'll be starting a global-warming hedge fund.

DATA: NODEX ALMOND SPOT PRICE; CONVERTED FROM RUPEE TO DOLLAR AND KILOGRAM TO POUND

Toph Tucker Apophenia & Co.

Stock price



Why does this company do so well but crash in January? Is it post-holiday recoil? Anticipation of filing tax returns?

DATA: RANDOM NUMBER GENERATOR

The joke is, there is no pattern: This is mock data, a totally random walk. I made it up. People are really good at seeing patterns—so good that they see patterns in nonsense.

DATA: COMPILED BY BLOOMBERG UNLESS OTHERWISE NOTED

Thanks for The Stock Tip, Mr. Senator

Inside the shadowy, poorly policed world of “political intelligence”

By Joshua Green

On April 1, 2013, an hour before the markets closed, a congressional staffer named Brian Sutter passed along to a lobbyist the kind of tip that can make a savvy investor a quick fortune: Medicare was about to raise some reimbursement rates, which would be a windfall for big insurance companies. Ten minutes later the lobbyist, Mark Hayes of Greenberg Traurig, whose clients included Humana, notified an analyst at Height Securities, a small Washington investment research firm. And minutes after that, Height issued a “flash report” to 200 investor clients, including several large hedge funds and money managers, 44 of which traded on the information and profited when shares of large insurers jumped just before the close, according to court filings by the Securities and Exchange Commission. Fifteen minutes after the bell, Medicare’s administrators announced to the public what this network of Washington insiders had long since ferreted out: Reimbursements were going up.

This episode is a prime example of the shadowy Washington business of “political intelligence”—gathering inside information on executive, legislative, and regulatory developments and selling it to Wall Street investors, who pay large sums to keep abreast of what’s going on behind the headlines and trade on it before anyone else. It’s clear such information is valuable. An August 2014 paper by two finance professors at the University of Illinois at Urbana-Champaign found that hedge funds which hired Washington lobbyists “gained an informational advantage in trading politically sensitive stocks” and outperformed funds that didn’t by 63 to 87 basis points per month. (A basis point is one one-hundredth of a percent.)

Is it legal? That’s a murkier question. SEC investigators have opened an insider-trading probe to determine whether a government employee improperly leaked the Medicare news and whether hedge funds violated securities laws by trading on the information. Humana fired Greenberg Traurig. Sutter resigned from his job on the House Ways and Means Committee staff. The SEC is fighting to subpoena him. The case has brought more scrutiny from powerful politicians skeptical of this controversial industry and sent a scare into

its practitioners. “We ought to know who these people are that seek political and economic espionage,” GOP Senator Chuck Grassley of Iowa groused on the Senate floor.

Small Washington advisory groups cropped up in the 1970s, but the father of the field is generally held to be Richard Medley, a former investing partner of billionaire George Soros. A onetime chief economist for the House Banking Committee, he went on to advise Soros on political affairs before founding Medley Global Advisors, a hedge fund advisory firm, in the 1990s. Informed by his years on Capitol Hill, Medley’s analysis of politics and financial markets, delivered in reports and newsletters, was closely followed on Wall Street. “When I came to the Street in 1991, people told me to look out for his reports because they could influence the direction of the markets,” Michael Franzese, managing director at Wunderlich Securities, told Bloomberg News in 2011, after Medley’s death.

Hedge funds soon realized they needn’t rely only on newsletters and began developing in-house intelligence operations. “I first became aware of their existence when I was working in Tom Daschle’s press office in 2002,” says Jeff Nussbaum, a partner at the communications company West Wing Writers. At the time, Daschle was Senate majority leader. “Along with reporters’ calls, we started getting calls from very aggressive hedge fund managers wanting to know which bills were going to move that day. It was my first indication that these money people had bets on what was going on.”

The appetite for political intelligence was initially concentrated on such heavily regulated industries as health care, energy, and defense. A famous example of how this vigilance can pay off came one day in November 2005, when trading in shares of companies facing asbestos-related lawsuits surged the day before then-Senate Majority Leader Bill Frist announced a surprise vote on a bill to create a \$140 billion public trust fund for asbestos liability claims. Traders had been tipped.

Initially the banking and financial-services industries weren’t



a big focus, because they weren't often the subject of major legislation. That changed when the financial crisis hit in 2008. The massive government intervention in the economy and the blizzard of new programs aimed at propping up banks and homeowners put a premium on insider knowledge. The intelligence industry mushroomed. By 2009 it was a \$400 million business, according to Integrity Research Associates, which tracks the sector, although nobody knows the industry's size for sure. Unlike lobbyists, political intelligence shops aren't required to disclose their clients or revenue. Most operate in the shadows.

As demand grew, the field became more competitive and the tradecraft evolved. In Washington, it's an industry hiding in plain sight. Its members swarm Capitol Hill receptions and think tank panels and even try to infiltrate background briefings for reporters—anything to suss out useful information. “You can recognize the political intelligence people by their designer eyeglass frames,” says Alec Phillips, an economist at Goldman Sachs in Washington. A former Senate Banking Committee aide says hedge fund managers often use their standing as big campaign donors to arrange private briefings with lawmakers; some also give money to think tanks to have access to well-connected specialists.

The targets of intelligence gathering aren't limited to members of the government and their staffs. The most effective operatives are expert at recognizing and exploiting mutuality

imagined: After his unexpected primary loss last April, he took a job with the investment banking firm Moelis.

Although the industry has dodged regulation, the financial rewards for tradable information are a constant temptation to cross the line of what's allowed. On March 13, House Financial Services Committee Chairman Jeb Hensarling disclosed that the FBI has opened a criminal investigation of the leak of confidential details from the Federal Open Market Committee's September 2012 meeting, which were published by Medley Global Advisors in an Oct. 3 client report. At the time of the meeting, the Fed was about to start a third round of quantitative easing.

Perhaps as a consequence of this negative publicity, practitioners avoid describing themselves with the increasingly toxic term “political intelligence” in favor of such vague but important-sounding euphemisms as policy research, strategic advice, and economic strategy. “The spotlight that's been focused on this issue has certainly had something of a chilling effect,” says William Baker III, a partner in the Washington law firm Latham & Watkins and former associate director of the SEC's Division of Enforcement. “It's made people more careful.”

“The spotlight that's been focused on this issue has certainly had...a chilling effect”

of interest. As I called around town to interview them—all insisted on anonymity—several pumped me for information as thoroughly as I was working them. One offered to share his research reports in exchange for my agreeing to talk to him about my published stories if he were ever interested in probing deeper into the subjects. I declined.

The premium on secrecy isn't merely to guard tradable investing tips. The industry operates in constant fear that negative attention will prompt a crackdown. In 2012, spurred by reports that politicians were trading on inside information, Congress passed the Stop Trading on Congressional Knowledge (Stock) Act. Originally, the act called for political intelligence outfits to disclose their clients and fees to federal regulators. But then-House Majority Leader Eric Cantor stripped the provision. “It's astonishing and extremely disappointing,” Grassley complained to the *New York Times*, “that the House would fulfill Wall Street's wishes by killing this provision.” Cantor may benefit more directly than he ever

Still, the work has become lucrative enough to attract not only former congressional staffers but also diplomats, White House advisers, even chief executives with the right Washington connections.

In 2012, Robert Wolf, the jovial former chairman of UBS Americas and a member of the White House Council on Jobs and Competitiveness, founded 32 Advisors, which bills itself as a boutique advisory firm for hedge funds, private equity firms, and money managers. Wolf is a close friend of President Obama's—his UBS office was decorated with a picture of the two playing basketball. One of his first hires was Austan Goolsbee, the former chairman of the White House Council of Economic Advisers. The firm's website even features the White House seal. Need insight on how Obama and his team view any sector of the economy? Wolf can deliver it. Just don't ask for political intelligence. “Oh, no, we're not political intelligence,” he insists. “That's not what we do.” To thrive in this business, it's wise to deny being a part of it. **B**

Peer-to-Peer In the OR



Is it weird to invest in strangers' surgeries?

By Ben Steverman

A year ago, Lesley Johnston weighed 298 pounds. At 30, the Norman (Okla.) resident suffered from hypertension, a rapid heart rate, and sleep apnea so severe she slept attached to a machine. In July, Johnston had bariatric surgery to shrink the size of her stomach. So far she's lost 72 pounds, and the apnea and hypertension are gone. "I don't worry about dying in my sleep," she says. Now her husband, Josh, wants the same surgery. And you might be able to profit from it.

Johnston paid for her procedure by putting \$15,750 on a credit card, but she and her husband are considering financing his surgery with a loan from LendingClub or Prosper Marketplace, the two largest startups in the rapidly growing field of peer-to-peer lending. The companies match borrowers who want to do home repairs or refinance debt with investors eager to diversify from stocks and get returns higher than those of traditional bonds. The platforms see health-care lending as a growth market. Both companies acquired small medical lenders in the past year: Prosper bought American HealthCare Lending in January for \$21 million, nine months after LendingClub acquired Springstone Financial for \$140 million.

The companies say they can offer simple, competitive loans to customers such as the Johnstons. "We need to educate more borrowers that this is here, that this is the better way to borrow," says Ron Suber, Prosper's president. The \$20 billion market for medical loans is growing 15 percent to 20 percent per year, he says. More Americans have insurance with high deductibles, while the improved economy prompts more spending on expensive elective procedures.

Peer-to-peer lenders are interested in the higher end of that market—targeting those with good credit who want to pay for veterinary care or teeth straightening, not uninsured people who've racked up emergency-room bills. Although



Prosper will fund cosmetic surgery, LendingClub won't, citing the category's worse credit record.

Lending on each platform more than doubled last year, to \$4.4 billion on LendingClub and \$1.6 billion on Prosper. At a time of historically low interest rates, with 10-year U.S. Treasuries offering yields of 2.1 percent, investors in peer-to-peer loans can get returns of 5 percent or more. Investors include individuals, hedge funds, and the world's largest asset managers. For their purposes, it barely matters if a loan is used to consolidate credit card debt or fund dental work, fertility treatments, or face-lifts.

If anyone's squeamish about making a percentage on his fellow citizens' health problems, there's no evidence of it on the Prosper and LendingClub servers, where almost every loan gets funded. Individuals can browse the sites, picking what level of risk they're comfortable with. Larger investors often take a more automated approach: Prime Meridian Capital Management, a California fund with more than \$50 million invested in peer-to-peer loans, has software that pings Prosper's servers 20 times a second looking for loans. Still, says Prime Meridian Managing Partner Don Davis, the firm is lucky to get 10 percent of those it wants.

Brendan Ross, the president of Direct Lending Investments, a California company that specializes in

the peer-to-peer market, sees loans for elective procedures as "happy loans." These borrowers, he says, want to feel or look better; they're unlikely to default on their spending. "Fixing your teeth is not something you do when you're in big trouble," Ross says.

To create more demand for medical loans that can be sold to investors, Prosper and LendingClub are working to establish relationships with networks of doctors, dentists, and other health-care providers. Patients are told that if they can't pay for a procedure with insurance or their own money, new financing options are available. To encourage patients to go ahead with their procedure, doctors pay fees to LendingClub, which then offers lower rates to the patients, including a no-interest period available on some loans. Prosper offers only fixed-term loans for periods of usually three or five years and eschews doctors' fees. Annual rates depend on a borrower's credit score and range from 6.7 percent to higher than 20 percent at Prosper.

The rates are generally lower than those offered by conventional medical lenders. One, Synchrony Financial, was spun off last year from General Electric and is now valued at \$27 billion. Johnston paid for her bariatric surgery with a CareCredit credit card issued by Synchrony. CareCredit's biggest advantage is size: The \$7.1 billion in health-care loans it made last year was more than the combined value of all loan types issued by Prosper and LendingClub.

Trouble at CareCredit may have given the lending startups an opening. In December 2013 the Consumer Financial Protection Bureau accused the company of "deceptive credit card enrollment tactics" and ordered it to refund \$34.1 million to consumers. Customers thought their loans were interest-free, the CFPB said. Instead, if loans weren't paid off by the end of a promotional period, borrowers had to retroactively pay annual interest rates of 26.99 percent.

Synchrony is trying to move past its problems with the CFPB. The company "ensure[s] that every CareCredit applicant is given easy-to-understand explanations of the financing options available," says Carlos Campos, a company spokesman.

Johnston is still evaluating ways to pay for her husband's surgery, which insurance won't cover. "If it was up to him, he would have it done this week," she says. "We want to make sure we can live as healthy as we can, as long as we can." **E**

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Setting the Strike Price

An athlete, like a stock, is an investible asset. How do you pitch one worth \$210 million?

By Joshua Green

In January, the Washington Nationals made the biggest investment ever in a free-agent pitcher, signing former Detroit Tigers ace **Max Scherzer** to a seven-year, \$210 million contract. Betting nine figures on a Cy Young Award winner is a lot different from investing in Apple stock or T-bills—Apple's earnings may disappoint, but the company will never blow out an elbow. On the other hand, there's only one Max Scherzer, and every team would love to have him. Adding him has made the Nationals preseason favorites to win the World Series.

How does such an investment come together? Scherzer's agent, Scott Boras, says the process is akin to running a Michelin-rated restaurant. "With premium players, it's like the aroma of a kitchen," he says. "Everyone wants to eat, but only a few people are going to get to sit at the table. When you have a great season like Max did, the aroma is out in the marketplace. Everybody's hungry."

After the 2014 season, Scherzer compiled a short list of teams he'd play for. Boras and his staff produced statistical models predicting how he'd perform in a variety of ballparks, backed by the different teams'

defenses. They were seeking the best fit. "Contract execution"—agent-speak for performing well—"is very important when you're doing these large deals," Boras says.

Any contract north of \$100 million is a potential franchise-altering deal typically negotiated directly with a team's owner. Boras met with five, including the Nationals' Ted Lerner. Just

as hedge funds will produce a prospectus for potential investors, Boras prepares what he calls a player "treatise": a bound compendium of statistics and economic analyses tailored to each owner and market. They aim not only to highlight a player's skills on the diamond but also to present him as a dynamic economic asset who will bolster the team's bottom line (thereby justifying a dynamic contract).

"The Nationals are perfect for Max because their attendance is so low," Boras says. "The key thing is they're not selling out. They can add 30 percent more fans." Winning more games and getting into the playoffs, he says, also mean teams get more money from TV rights.

Once the treatise is delivered, the negotiations can begin. Boras, who's a lawyer in addition to being an agent, met four times with Lerner, a real estate developer billionaire, with each meeting running four or five hours. "Much like a lawyer taking a deposition, you've got to listen, and listen intently," he says. "Learn about what the model is that makes an owner tick—each owner has his own economic premise, his own foundation." Lerner's foundation is real estate. "My job is figuring out what language I have to learn," Boras says. "If I go in there talking baseball, where am I getting? Nowhere. I've

got to learn real estate. I've got to learn how he was successful. I've got to give him ideas that relate to how he can optimize his franchise."

Here's an idea Boras gave to Lerner: Scherzer won 70 percent of his games in Detroit despite a lousy defense. The Nationals' defense is superb. (Several others, including Bryce Harper and Jayson Werth, are Boras clients.) So Scherzer could be expected to perform even better. Another idea: The Nationals already have an ace, Stephen Strasburg (also a Boras client). Adding Scherzer would let Strasburg face other teams' second-best pitchers—another advantage. The Nationals' wins would mount.

Excitement would grow. The ballpark would sell out. "You create a vision of the owner's goal," Boras says.

Pretty soon, the idea of paying a pitcher \$30 million a year stops seeming quite so crazy. "When you factor in the economic component, what it does for your team economically," Boras says, "can't Max Scherzer make *you* money?"

Does this sound like clever marketing? If you answer yes, you'll offend Boras, even wound him. He bristles at the notion that he'd engage in something so crude. He prefers to view his players as having an intrinsic economic value and his job as clearing away the fog so owners can see it for themselves. "When an appraiser goes to a building and gives a building report, they don't call it marketing, they call it an appraisal," he says. "Well, the building happens to be a pitcher. The building exists. The building is performing.... The building attracts people. Our job is to reveal the true value of the asset."

Still, this building has an elbow, and the developer will worry about that. Boras has anticipated this. Scherzer, it turns out, has thrown far fewer pitches than other players his age. His delivery is clean and efficient. He throws heat, but he'll also ring up batters on change-ups and curveballs, so his arm isn't dangling by his side at the game's end. He's built

to last. It's all there in the treatise.

"Everyone has their methodology," Boras says, "their comfort level." He reaches for another analogy. "My job is to get enough pillows on the bed. If I can do that, then I'm going to get somebody who's going to want to lay down in it." **B**

"With premium players, it's like the aroma of a kitchen"

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Be Smart About Art

Hunt for the overlooked and underappreciated By James Tarmy

Most people like to look at art, some people like to buy art, and almost no one likes to overpay for art. Yet that's almost undoubtedly what's going on in the hottest part of the market: postwar and contemporary art.

Sales of these works have ballooned from \$260 million in 1995 to \$7.8 billion last year. When a category that spans a mere seven decades accounts for 48 percent of 2014's total fine art auction

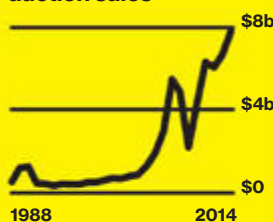
market, it's safe to say that bargains in the field are few and far between.

People who collect for the long term may get more for their money by adapting the

strategies of value investing. That means forgetting contemporary and postwar works and looking for unfashionable or neglected pieces with intrinsic value. "We need people to recognize that it's still possible to collect without having vast resources," says James Steward, director of the Princeton University Art Museum. "I try to steer people to the fact that if they buy counter to fashion, or something that hasn't been discovered, there can be real opportunity."

This isn't about flipping art for profit; it's about landing gems you find beautiful on their own terms and whose worth hasn't been inflated beyond reason by speculators or hype. Here are some approaches to buying outside the bubble.

Postwar and contemporary auction sales



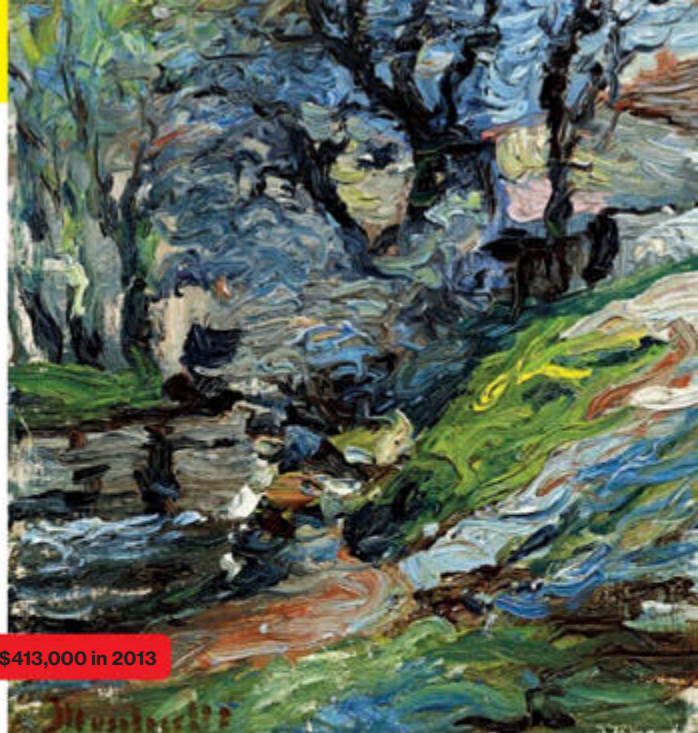


"If they're talented enough and were popular enough, there's a **good chance** they'll come back"

Adolphe Monticelli
A Gathering in the Woods



Sold for \$10,423 this year



Sold for \$413,000 in 2013

Adolphe Monticelli
Au Bord de la Rivière, Marseilles

1. Buy out of style



Art is like fashion—tastes change all the time. "The art market is cyclical," says Inge Reist, director of the Center for the History of Collecting at the Frick Art Reference Library in New York. "Some artists go in and out of favor. If they're talented enough and were popular enough, there's a good chance they'll come back."

Take Adolphe Monticelli, one of the most famous artists during the 19th century. Vincent van Gogh considered him a mentor; Paul Cézanne apparently found inspiration in his landscapes; Oscar Wilde even lamented selling a Monticelli

in *De Profundis*. But eventually the painter was eclipsed by the impressionists. His work languished for almost a century.

Recently there have been efforts to resuscitate his market. A 2008-09 exhibition in Marseille paired Monticelli with Van Gogh—an influential bit of curation that reminded collectors of the forgotten master. In 2013 a late Monticelli, *Au Bord de la Rivière, Marseilles*, sold at Sotheby's in New York for \$413,000, five times its high estimate. His overall market is still in a lull. But more than a few collectors are betting that Monticelli will be back in vogue soon.



Sold for \$1,250 this year

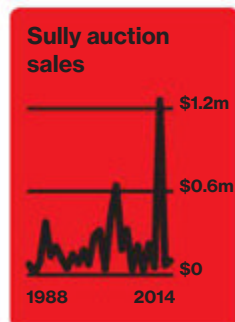
Thomas Sully
Portrait of John Vaughan

Sold for \$8,125 in 2013

Sully is another artist out of style. His portrait of Andrew Jackson was the basis for the illustration on the \$20 bill.



Thomas Sully
Portrait of a Young Woman





Colima seated figure with bowl
ca. 100 B.C.-250 A.D.

Sold for \$7,500 in 2013

Pablo Picasso and Willem de Kooning favored African art—making it expensive—but with **no major backers now**, pre-Columbian objects are a steal



Sold for \$3,600 in 2007

Chimu gold mask
ca. 1000-1250 A.D.

2. Buy obscure but important

Some collecting categories remain improbably affordable because few people are aware they exist. How else to explain the prices of pre-Columbian art—the sculptures, vases, artifacts, and jewelry made in South and Central America from 13,000 B.C. to 1500 A.D.?

“I think a lot of people are surprised that there is authentic, ancient material with good provenance that is, relatively speaking, affordable,” says Stacy Goodman, a senior consultant for pre-Columbian art

at Sotheby’s. “You can certainly buy a super-high-quality piece for under \$10,000.”

A 2,000-year-old painted figure sold for \$7,500 at Sotheby’s in New York in 2013. A 1,500-year-old Mochica shell necklace embedded with turquoise went for \$5,400 at Christie’s in 2006, or about \$2,000 less than a new gold-and-silver T necklace from Tiffany.

“I don’t follow what the gold value is from day to day,” Goodman says. “But certainly there are times that the value of the weight of a work is greater than the estimate” of what it would sell for at auction. A gold figurine that’s thousands of years old, in other words, sometimes costs less than it would if it were melted down and sold as an ingot.



Sold for \$11,250 in 2013

Maya carved grayware vase
ca. 550-950 A.D.



Sold for \$5,400 in 2006

Mochica shell-and-turquoise necklace
ca. 200-600 A.D.

Art-Buying Cautions

Sometimes art is cheap for a reason. Here are a few things to look out for when bargain hunting.

Provenance
It matters who’s owned the work before you. If an antiquity turns up in the late 1980s without a clear ownership/excavation history, there’s good reason to question whether it was acquired legally. Same goes for a painting.



John Constable
Portrait of a Gentleman

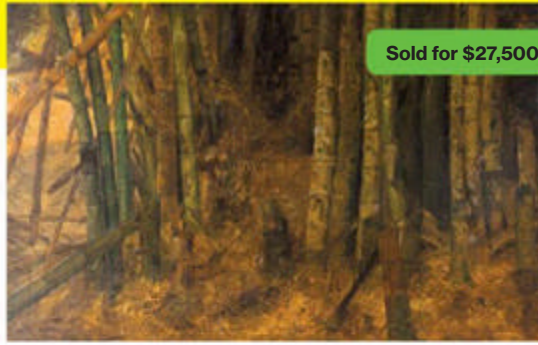


Constable's
landscapes
fetch

millions; his
portraits,
not so much

Sold for \$28,000 in 2014

Frederic Edwin Church
A Study of Bamboo



Sold for \$27,500 in 2013

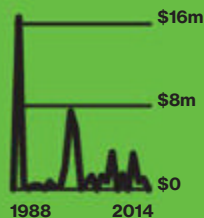
In 1989, *L'Embarcadère* sold for \$21 million, adjusted for inflation. At the time, early Monets were prized over late ones. Now that's switched, and the painting's worth has declined—it sold for \$15.4 million last year.



Claude Monet
L'Embarcadère

3. Buy outside the narrative

Church auction sales



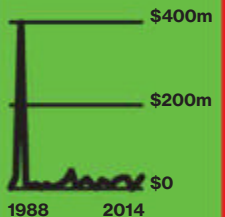
The worth of any artist is tied to the perceived art-historical significance of the work. John Constable's *plein air* oil paintings are prized because "there was a sense that he was a modernist, after the fact," says Princeton's Steward. "He can be accounted for very happily in the linear march of history." Many of his paintings are already in museums; major works sell for millions when they come to auction. *The Lock* fetched a record \$35 million at Christie's in 2012.

Constables that don't fit snugly within the *plein air* narrative, however, are comparative bargains. Many collectors ignore his portraits, painted indoors; one of them sold for only \$28,000 at Christie's in 2014. And a drawing of Salisbury Cathedral sold for a bit less than \$25,000 at Bonhams in 2013, even though it was created

during one of his desirable periods.

Another example: When Frederic Edwin Church, a founding member of the Hudson River School, sold his massive *The Heart of the Andes* in 1860 for \$10,000, it was the highest price ever paid for an American painting. By the 1880s, though, "he began to look fuddy-duddy and homegrown," says Evelyn Trebilcock, the curator of the Olana Partnership, a house museum dedicated to Church's life and work. His prices fell into a slump that lasted 90 years. Only in 1979 did his market revive, when *The Icebergs* sold for about \$2.5 million at Sotheby's. Church's giant oil paintings still sell for millions, but at auction collectors can find bargains among his smaller works. In 2013 an oil-on-paper study of bamboo sold for \$27,500 at Bonhams, and a small landscape went for \$25,000 at Christie's.

Constable auction sales



Attribution

It also matters who made it. Many artists didn't keep detailed records, and there are often paintings whose owners—either through misinformation or wishful thinking—want to resell their second-rate landscapes as hidden masterpieces.

Verification

There are a lot of outright fakes; make sure whatever it is you want to buy has been verified by either an artist's estate, a scholar (often happy to lend expertise for a price), or a third-party specialist at an auction house or gallery.

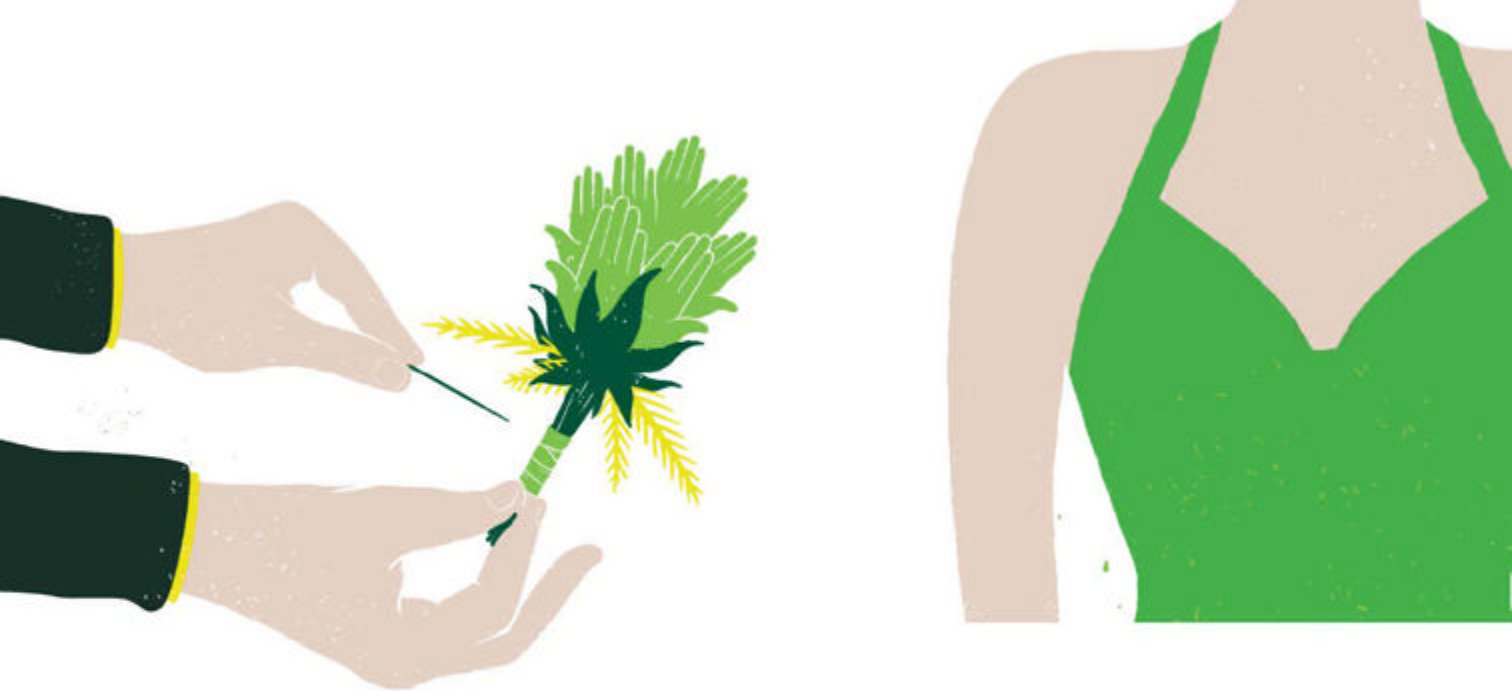
Condition

Four hundred years can take their toll. Make sure you either inspect the object yourself or get a detailed condition report from the seller. (It's a standard request.)

John Constable
Salisbury Cathedral: The West End



Sold for \$24,558 in 2013



Our rollover consultants give you more hand-holding than a junior high prom.

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Rethinking the Shift-To-Bonds Strategy

Low rates and longevity alter rules for retirees
By Karen Weise and Carol Hymowitz

Investment adviser Brett Danko has a warning for a New Jersey couple in their early 50s who've sought his help about how to plan for retirement: Either allocate more savings to stocks than fixed income, or risk having to scrimp in old age.

The couple, ages 51 and 53, have about 80 percent of their \$1 million retirement savings stashed in government bonds yielding just 1 percent to 2 percent; the rest is in stocks. They'll need to double their nest egg if they want to retire at 67 and have the \$80,000 a year they're hoping to draw from their investments, says Danko, an adviser at Main Street Financial Solutions in Pennington, N.J. "Their risk tolerance is very low, and I don't want them staring at the ceiling at night and worrying," he says. "But if they don't change how they're allocating savings, they'll be worrying in their 80s, when they may start running out of money."

There used to be a simple rule for retirement savers: The percentage of bonds in your portfolio should match your age. So a 60-year-old would have

60 percent of her retirement stake in bonds. The idea was that, as you aged, you should use bonds—which offer dependable payouts and rarely default—to shield more of your money from the wild swings of the stock market, even if that meant sacrificing potential investment gains. But today, in an era of ultralow interest rates and longer life spans, that one-size-fits-all approach won't work for many people nearing retirement.

No one really knows what to replace it with. There's no consensus among professionals about how baby boomers should allocate their savings. That's apparent in the surprisingly wide variations in the allocations in target-date mutual funds,

which automatically reset the mix of stocks, bonds, and cash, depending on what year investors plan to stop working. At the end of 2014, equity allocations in 54 target funds aimed at people retiring in 2015 ranged from 8 percent to 68 percent, Morningstar found.

If you're devising your own allocation, you've got to consider a lot of variables—including life expectancy, health, and other sources of income—and do a lot of guessing. People who keep working into their 70s, or retire at 62 but have a pension that provides guaranteed lifetime income, can afford to keep more money in stocks. A 65-year-old in bad health won't need to increase her savings as much as someone who's 65 and might live to 105, says Ann Kaplan, founder of Circle Wealth Management, a New York investment advisory firm. "There's no cookie-cutter solution," she says.

"They don't know if they're going to be running a sprint or a marathon as they age—and have to plan for the marathon"

Julie Jason, head of the investment management practice Jackson, Grant Investment Advisers in Stamford, Conn., tells clients to spend a lot of time calculating their current annual expenses and what they expect to need in the future to cover housing, food, travel, medical, and other costs. She calls this “demand-based” retirement planning. “The people most at risk are those who don’t know how much they’re spending each month and don’t know their needs vs. wants,” she says.

Once people have a clear idea of their expenses, they can better understand whether they’ll be able to ride out down years in the equity markets. “One person’s flexibility is another’s fixed cost,” says Anthony Webb, senior research economist at the Center for Retirement Research at Boston College. “Is a trip to Paris every year a luxury you can cut out? It depends on who you are.”

Now is a particularly dicey time to be loading up on bonds. If interest rates rise by just 1 or 2 percentage points over the next few years, there will be big losses in the value of some bond portfolios, Main Street’s Danko says. An investor who recently bought a 10-year Treasury note yielding 2 percent would see its value decline almost 9 percent if interest rates rise to 4 percent in the next five years. “I look at the risk-return and don’t find it in long-term bonds right now,” says Danko, who’s telling clients to stick to short-term, which take less of a hit than longer-term bonds when rates rise.

John Sweeney, executive vice president for retirement planning and strategy at Fidelity Investments, advises those in their 50s and 60s to take more risks than they might if interest rates were higher. “We’re asking folks to make sure they aren’t too conservative at a time when interest rates are so low,” he says. “They need some portion of their savings growing, because they don’t know if they’re going to be running a sprint or a marathon as they

Moving Targets

Even experts can’t agree on how much money older investors should shift to bonds. Target-date funds from three large money managers have dramatically different allocations.

□ Stocks ■ Bonds ■ Cash



Fidelity Freedom 2015 Fund



Vanguard Target Retirement 2015 Fund



Wells Fargo Advantage Dow Jones Target 2015 Fund

age—and have to plan for the marathon.”

Many advisers caution against trying to boost income by investing in riskier issues, such as junk bonds. Arden Rodgers, who heads investment adviser Arbus Capital Management in New York, has been counseling a retired couple in their mid-50s who

have about \$5 million in savings. When he first began working with them a few years ago, about 75 percent of their savings was in government bonds, and they worried about the low interest these bonds were yielding. “Like a lot of retirees, they wanted to live entirely off their interest and dividends and not touch their principal,” Rodgers says. “It’s a psychological issue for a lot of folks who’ve been savers all their lives.”

To get more income, the couple considered buying riskier, high-yield bonds, but Rodgers advised that if they wanted to add risk to their portfolio in hopes of higher returns, they should allocate more to stocks. “Don’t make your bond portfolio more risky, because that’s where you want stability,” Rodgers told them. They’ve gradually reallocated their savings so they now hold only 40 percent in fixed income and 60 percent in stocks.

Wade Pfau, a professor of retirement income at the American College in Bryn Mawr, Pa., recommends building a portfolio of bonds that come due at different times and holding them to maturity—a practice known as laddering. That gives you cash coming in at regular intervals, which lowers the chance that you’d have to sell investments during a market slump to cover unexpected expenses. It also allows you to reinvest money at higher yields if rates are rising.

High-quality dividend-paying stocks can also be an alternative to low-yielding bonds. Eleven of the 30 stocks in the Dow Jones industrial average yielded more than 3 percent as of March 12.

Annuities offer the security of guaranteed lifetime income, letting people take more risks with the rest of their portfolio. Annuities are priced based on prevailing interest rates, though, and low rates make them more expensive. Olivia Mitchell, a professor at the Wharton School at the University of Pennsylvania, says products such as longevity annuities, which defer income down the road—typically to when an

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investor turns 85—can still be worth it, because they provide peace of mind for people scared of running out of money. New York Life Insurance says a 65-year-old couple could spend \$100,000 on an immediate annuity and get \$437 a month for the rest of both of their lives, but if they deferred taking the payments for 20 years until turning 85 they could get \$2,682 a month for the rest of both of their lives.

About a quarter of people currently in their 60s receive pension income, says the Employee Benefit Research Institute, though that number will decline with future generations, because companies have largely abandoned pensions. One of the best ways to increase a dependable income stream is to delay taking Social Security, says Michael Finke, a professor in the department of personal financial planning at Texas Tech University. He says it's like buying "a supercheap annuity from the federal government." Monthly benefits can be 76 percent higher for people who wait until age 70 instead of starting at 62, the earliest allowable age. Fewer than 15 percent of people currently receiving Social Security waited until age 70.

People who need to save more, says Judith Ward, senior financial planner at T. Rowe Price, should consider trying to work longer, which lets them accumulate more savings and delay drawing down their nest egg. "That is not always the answer they want," she says. People can get creative: Her mother took in a tenant, a family friend who needed a place to stay during college. "It was a nice little income stream for a few years," Ward says. More broadly, she says, investors can put too much emphasis on their asset mix rather than looking at the bigger-picture questions of how much they're saving before retirement and how much they'll spend once they stop working. "The allocation can help on the margin," she says, "but primarily it is the behavior that is really, really important." **B**



Who'll Pay That Nursing-Home Bill?

Genworth stumbles on long-term care By Zachary Tracer

Here's an uncomfortable question: Who's going to pay for Mom and Dad's nursing-home bill—or yours, for that matter? The answer, for about 1.2 million Americans, is Tom McInerney, chief executive officer of Genworth Financial, the beleaguered long-term-care insurance giant.

Long-term-care policies written

in past decades have turned into a black hole for the insurance industry. Executives misjudged everything from how much elder care would cost to how long people would live. As a result, the policies are costing insurers billions more than they expected.

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damage, Genworth has tightened standards for new policies and raised premiums on existing ones. "I was mad as hell," says Arthur Mueller, an 83-year-old former real estate executive who lives in Dallas. Over the past 15 years, his annual Genworth premium has roughly doubled, to \$6,879.

There's no quick or easy fix for Genworth, which has posted two straight quarterly losses. Its stock has fallen by more than half in the past 12 months. Standard & Poor's and Moody's Investors Service downgraded the company's debt ratings to junk in November, citing the pressure from long-term-care policies.

Genworth and other insurers have had to contend with three powerful forces. The first is the rising price of elder care. Nationwide, the median cost of a private room in a nursing home has risen more than 4 percent annually in the past five years, to more

in 2010, the Congressional Budget Office projects.

Given that outlook, you might think more people would be buying long-term-care insurance, which typically covers nursing-home costs and home-health aides. Just the opposite is happening. Sales are falling, and big insurers such as MetLife and Prudential Financial have stopped writing policies. "What's happened over the last five, six years is an example, frankly, of market failure," says Howard Bedlin, vice president for public policy and advocacy at the National Council on Aging. "There was a slew of pretty significant premium increases."

Still, Genworth executives such as McInerney, who joined the company in 2013, say they'll get it right eventually. "While the product and the market has had its challenges, somebody is going to figure this out," says Chris Conklin, a senior vice president at Genworth.

Government programs cover much of the rest. Long-term-care insurance works best for people who want more costly care than is covered by Medicaid, according to Jeffrey Brown, a professor at the University of Illinois at Urbana-Champaign.

Karen Marshall, 40, says she's learned how expensive care can be without the insurance. She took leave from a high-paying job as an attorney at Dewey & LeBoeuf in Washington, D.C., when she was in her 30s to take care of her mother in her final months of battling cancer. Soon after her mother died, her father's health deteriorated, and Marshall left the firm.

She was spending her weekends driving from Washington to the home where she grew up in southern Virginia. Working as a corporate lawyer wasn't an option. "I just kind of felt like I had my back against the wall," Marshall says. "I spent so much time worried about dropping the ball for someone, whether it be my dad or work."

Her father is now in an assisted-living facility that costs more than \$2,500 a month, and Marshall says he'll eventually have to move to a nursing home that will cost twice as much. Marshall, who started a nonprofit to aid other caregivers like herself, takes on legal work to pay the bills. She says her dad will eventually end up on Medicaid.

Policymakers have been trying to figure out how to cope with the nation's elder-care bill but so far have come up with few answers. The White House agreed to kill a plan for long-term-care insurance tied to the Affordable Care Act as part of a deal with Congress to raise the debt ceiling in 2013. Genworth says insurance is just part of the solution to paying for long-term care. The company is exploring ideas such as government partnerships and new products that could have more limited benefits and cost less. "It's a daunting problem for the whole country, really," Genworth's Conklin says. **E**

**"I spent so much time worried
about dropping the ball
for someone, whether it be
my dad or work"**

than \$87,000, according to Genworth. Second, interest rates have plunged to record-low levels. Insurers need to invest funds for decades before paying out on long-term-care claims, so low rates hit profits from those policies particularly hard.

The third problem is demographics: Almost a quarter of Americans were born from 1946 to 1964, the typical definition of the Baby Boom generation. That's more than 75 million people. By 2050, when the youngest boomers will be in their 80s, long-term elder care will devour about 3 percent of the U.S. economy, up from 1.3 percent

"We're sure going to try hard to have us be the ones that do it."

Even with higher premiums, Genworth says its products are a good deal. Despite his higher costs, Mueller says he's sticking with his policy, given his age, the amount he's already spent in premiums, and what nursing-home care could end up costing. His main concern, he says, is whether Genworth will still be strong enough to pay for a nursing home if he ever needs one.

Long-term-care insurance might not make sense for many people. More than half of all elder care tends to be provided informally by family members.

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Secrets Your Pension Fund Can't Tell You

By choosing private equity, plans keep workers in the dark

By Neil Weinberg and Darrell Preston

Kentucky high school history teacher Randy Wieck is on a lonely mission to discover the whereabouts of the 12 percent of each paycheck he and 74,800 other educators are putting into a state pension fund. He's especially keen to unearth details on the \$1.1 billion the badly underfunded Kentucky Teachers' Retirement System has committed to private equity and hedge funds. The quest pits Wieck against billionaire fund managers, a white-shoe law firm, state pension officials, and even his own union. "It's my money and taxpayer dollars they're skimming," he says. "And they refuse to say how much they're charging."

Wieck filed an open-records request last fall seeking access to details of the terms under which his pension plan had invested in alternative assets. Frustrated by the resistance he faced, he drafted his own legal complaint and sued the plan in Jefferson County Circuit Court in November. The suit was dismissed on jurisdictional grounds in March. Wieck is considering whether to refile in Franklin County, where the judge said the suit belongs.

The teacher's contention that

alternative-asset managers may be tacking on hidden charges and otherwise harming investors is supported by research from the U.S. Securities and Exchange Commission. More than half of alternative-asset managers surveyed by the SEC were found to be adding "hidden fees" on top of those disclosed to clients, Bloomberg reported last April. Given the broad concerns the SEC raised, Blackstone Group and TPG Capital have begun detailing in marketing materials tens of millions of dollars they charge portfolio companies for services such as health-care consulting and bulk purchasing.

Private equity firms pool money from investors to buy companies with the goal of restructuring and reselling them at a profit. Pension funds have invested more than \$3 trillion in private equity and other alternative assets. It's expensive: Pension funds and other investors typically pay private equity firms 2 percent in annual fees, plus 20 percent of profits on any investments.

Private equity officials say that to run their businesses, they have to keep virtually everything about their operations secret, including their fees. They often require the public

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pensions investing in their funds to sign confidentiality agreements and join them in resisting Freedom of Information Act requests, open-records requests, and legal actions by pension participants, taxpayers, or anyone else seeking details about the agreements. Dory Wiley, chief executive officer of Commerce Street Holdings, defends the need for secrecy. His funds have what he calls a unique strategy for buying distressed bonds that he doesn't want

others to imitate. "You can't copyright an idea," he says. "And there are a lot of firms on Wall Street that copy what others are doing."

Wieck—a Louisville native with a Ph.D. in American studies from the Sorbonne—believes he and his colleagues have reason to worry. Theirs is one of the worst-funded teachers' plans in the nation, at \$18.7 billion in assets, with just 54¢ on hand to pay each dollar of promised benefits.

After Wieck sued, Carlyle Group and Blackstone separately hired Joseph McLaughlin of Simpson Thacher & Bartlett, who drafted almost identical letters arguing that releasing the documents "would cause substantial competitive harm." Sharing an edited version was also impractical because "confidential trade secret information pervades the requested documents." McLaughlin and spokesmen for Carlyle and Blackstone declined to comment. **B**

Gag Order

Private equity firms typically require pension funds and other investors to sign confidentiality agreements. A review of private equity contracts obtained by Bloomberg shows that much of what the industry wants to keep hidden has as much to do with high fees, weak oversight, and conflicts of interest as it does with business strategies or other trade secrets. The excerpts below are from Blackstone Group, Camelot Group, Commerce Street Capital, HKW, and Starwood Capital documents. All but Camelot declined to comment.

1 Assets are worth what the fund says they're worth

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2 Managers decide what to pay themselves

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3 The chief compliance officer freelances at your expense

"A law firm wholly owned by HKW's partner, General Counsel and Chief Compliance Officer, also has an arrangement with five of the HKW Funds to act as counsel when such HKW Funds purchase or sell portfolio companies.... There may be a conflict between her economic interest and what is in the best interests of those HKW Funds."

4 Yes, the fund self-deals, but you still must trust us

"Fund managers can invest in companies in which they have a preexisting interest. They may invest in other funds which may compete with the fund for investments, management's time and in other ways.... Investors will ultimately be heavily dependent upon the good faith of the fund managers."



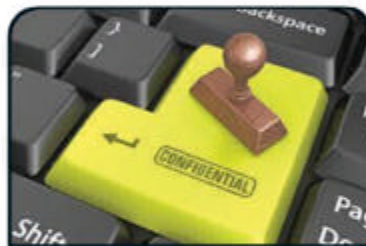
5 It's industry practice for some investors to profit at the expense of others

"In accordance with common industry practice, managers may enter into 'side letters' that grant certain investors rights, benefits and privileges not made available to other investors. Such agreements will be disclosed only to investors who have negotiated rights to review such agreements."



6 Rules? Not for us

"The fund is not subject to the Investment Company Act, which, among other things, requires investment companies to have independent directors and to maintain their assets and securities in the custody of a qualified custodian."



7 Public officials must fight for our secrecy

"If a public records access law requires a limited partner to disclose information... the limited partner must take all reasonable steps requested by Blackstone to oppose and prevent disclosure."



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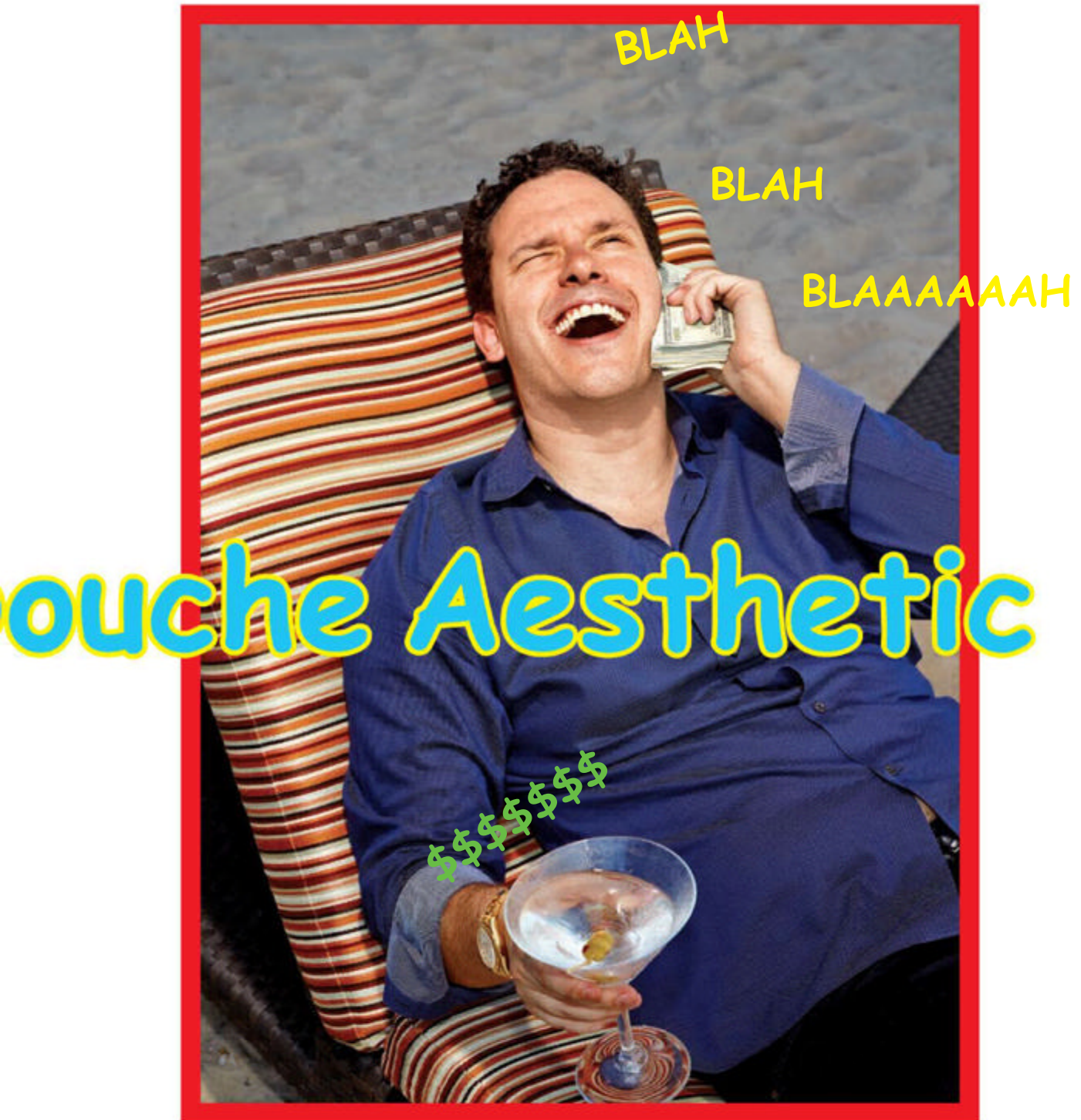
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Embracing the D



Tim Sykes has found the perfect trade:
His dignity for saps' dollars
By Caleb Hannan Photographs by Andrew Hetherington

Tim Sykes has a lot of advice for the people who aspire to be as wealthy as he is. Today, the chubby-cheeked 33-year-old has a characteristically strange suggestion: self-harm. “I want everyone to take your hands,” he says into the camera lens of his laptop, “and smack yourself in the face!”

Sykes is seated alone at the dining room table of a \$3,000-a-night suite at the Gansevoort hotel in downtown Manhattan. Facing his computer in only a bathrobe and glasses, he looks at the stock chart of a little-known security company called Technical Communications, up 30 percent today on news of a contract to provide encryption to the Egyptian military. Also looking at his screen via a live stream are a few hundred of his most dedicated customers. Sykes runs a social network for traders called Profit.ly, which has about 50,000 members. A subset of 6,000 pay to receive daily e-mail tips, weekly newsletters, and access to thousands of videos such as the trading webinar he’s just begun. These are the people who failed to correctly guess the answer to his hypothetical—“Which stock am I looking at right now?”—and thus necessitated that slap to the face.

“Smack yourself if you don’t get that you should be looking at the day’s biggest percent winner,” Sykes says into the camera. “Over the next two hours this is my No. 1 trade.”

Sykes is a lot of things: a penny-stock trader, a Web entrepreneur, a failed hedge fund manager, and perhaps the most unashamedly press-friendly person in finance. But what he is most of all is a student of hype, the kind that makes the cheap stocks he favors spike and tumble and the kind he manufactures. In the past few years he’s appeared on a handful of reality-TV shows; made parody videos of top-40 songs with

them but as an opportunity to learn more about their patterns. Around the same time that he started Profit.ly, he watched the biopic *Kinsey*, about the pioneering sex-education researcher, and saw a parallel. “Look up stats about sex education before Kinsey got started,” he says. “People just didn’t want to talk about it openly. Just like the ugly world of penny stocks. Back then everyone’s dirty secret was sex. Today, I’d guess that most traders and investors have tried penny stocks. They’re so tempting! But 90 percent of the people who trade lose. They’re degenerates. I’m trying to give structure to junkies.”

Sykes’s own addiction began as a teenager in Connecticut, when Tommy John surgery cut short a promising tennis career and he was forced to find a new hobby. He quickly became obsessed with the stock market, running between three computers in his high school’s library to keep up with the rise and fall of companies he’d previously never heard of and knew nothing about.

During the fall semester of his freshman year at Tufts University in 2000, Sykes began trading in earnest using the \$12,000 his parents had saved from his bar mitzvah. “We figured he would lose it all and learn a valuable lesson,” says his mom, Jo-Ann. He didn’t. Instead, he found a convenient creation myth.

Naturally impatient, Sykes was drawn to the riskiest category of equities: penny stocks. “In my mind it was simple,” he says. “Penny stocks were not only affordable, they were more volatile and more predictable than the larger, higher-profile stocks.”

That predictability was partly the result of something else Sykes didn’t yet understand: the Internet bubble. “I was about to discover I was in the perfect place with the perfect naiveté at the perfect time in stock market history,” he would later write in a self-published book, *An American Hedge Fund*.

One of Sykes’s most profitable strategies was to buy shares in any company that announced it was adding “.com” to the end of its name, whether it had a working website or not. By the time he

realized that his profits were more a result of luck than skill, the market had turned, and Sykes adjusted. He taught himself how to short and bet against the crashing stocks of hot companies he’d bought on the way up.

After transferring to Tulane University, in part because the girls at Tufts, he says, were “too unattractive,” he endowed the Timothy Sykes Daytrading Award for the Talented. The absurdist title was inspired by his love for the comedy *Zoosander*, which also features an improbably named charity. He charged the \$15,000 scholarship to his American Express card. By graduation day—which he missed because he was executing a trade that made him the equivalent of his last semester’s tuition—he’d turned his bar mitzvah haul into \$1.65 million, before taxes, he says.

Sykes next started a hedge fund called Cilantro Fund Management. Early profits got him included on a 30 Under 30 list published by the short-lived magazine *Trader Monthly*, a wannabe *GQ* for the finance world, and that, in turn, led to an invitation to appear on CNBC. The prospect of being on live TV scared Sykes so much, he had to down shots of vodka to loosen up. “I was drunk as s---,” he says. Sykes spoke openly on-air about his biggest loss, a \$200,000 hit, with as much glee as his gains. “Most traders don’t like talking about their losses,” he says. “I didn’t care, and that set me apart.” The response was immediate. CNBC wanted him back, and the segment led to his first appearance on a reality-TV show, *Wall Street Warriors*. ➔

“All his marketing makes him look like a jerk,” says his mom

his 21-year-old model girlfriend; antagonized CNBC by posting an unflattering picture of its then-top anchor; and purchased a \$200,000 sports car that he doesn’t enjoy driving, all in the name of publicity, both good and bad. He’s pretty open about what he’s doing: “I play the role of the rich douche bag.”

For Sykes, every day brings a new opportunity to call attention to himself. He also maintains timothysykes.com, where he sells how-to-trade-like-me DVDs for as much as \$1,500. In November, to gin up interest in a new disc, he asked his social media followers to leave a comment below a picture of his Porsche, which he said he’d give away to the person he thought was most deserving. “I get to embrace my weirdness,” he says. “The weirder I am, the more viral it goes.” The post has more than 20,000 Facebook “likes” and 3,800 Instagram comments; he still hasn’t given away the car.

Sykes courts attention so investors will find his websites and pay him for advice. After first trading with his own money during the Internet craze and then running a hedge fund that went bust in 2007, he refashioned himself as a guru, telling followers how they can profit by buying and selling penny stocks. He says he’s made \$4 million on such trades—and he can teach you how to read market patterns, too, if you’ll just enter your credit card number.

Penny stocks are the most dangerous corner of the market—rife with fraud and get-rich-quick scams—and no legitimate financial adviser would ever recommend them to a client. Sykes views the sketchiness of penny stocks not as a reason to avoid

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Sean Skelton, the show's co-creator, says Sykes was originally supposed to be in only one episode. But he was a natural in the heavily scripted, drama-rich environment of reality TV. In contrast to the staid financiers Skelton's camera crews were following, Sykes was eager to perform. He threw furniture, dated models, and partied late into the night. He even let the show film his mom "accidentally" discovering a pair of handcuffs in his bedroom while she was cleaning his penthouse. "There was no one else like him," Skelton says. "He was young and cocky, and he loved the camera." Sykes would tend to agree. "*Wall Street Warriors* was when I realized that even though my performance was shot because of one bad investment, I could still make a name for myself by being unruly," he says. "'Cause everyone in finance is so f---ing boring."

The TV gig helped his social life—"I didn't pay for a drink for six months after it aired," he says—but it did nothing for his business. Likewise, appearances on CNN, where he debated a porn star and a rabbi on the value of greed, were fun but didn't improve his bottom line. Then, in 2007, he was the subject of an embarrassing Page Six item in the *New York Post*. The tabloid reported that Sykes had been denied entry into *Trader Monthly's* latest party because his returns had taken a nosedive. In the 24 hours after the story ran, Sykes says, he sold 1,000 copies of his book, which was published that week. It was a lesson in the value of infamy.

Cilantro kept struggling. Sykes lost a third of his fund's assets, after a failed investment in an e-commerce company, and he shut down operations in October 2007.

It didn't affect his marketability. As the reality show got picked up in Europe and South America, Sykes began receiving fan mail from all over the world. The letter writers wanted what Sykes had—money—but had no clue how to make it. "The show made me realize there was a much greater need for education and transparency than there was for another kid to manage rich people's money," he says.

Sykes started offering free advice online a year after closing his hedge fund. He wrote about the importance of trading conservatively—"I trade scared; I'm a f---ing coward," he says—and told his readers to look for fraudulent-seeming stocks and short them. It's impossible to know how many people lost money on Sykes's ideas, but he's made sure to promote the winners. One day trader, Michael Goode, 34, who lives in western Michigan, says he's made \$1.4 million investing with Sykes's techniques.

At first, Sykes believed he'd be best served by writing what he called "exposés." The penny-stock world had a remarkable number of famous people vouching for suspect companies, which allowed him to get attention by attacking them. Tiger Woods was a spokesman for a nutrition company called Fuse Science—the logo was even on his golf bag—which now trades at a fraction of a penny per share. Justin Bieber made the cover of *Forbes* even as two penny stocks he'd sponsored lost almost all their value. And Shaquille

O'Neal, during an NBA championship ceremony, wore a hat with the logo of a penny-stock company he owned a stake in; its dissolution ended with a 20-year jail sentence for stock fraud for the company's chief executive officer. Sykes wrote relentlessly about these short targets—so much so that he received multiple cease-and-desist letters from lawyers representing the celebrities. It earned him street cred among day traders and potential customers: one truth teller helping small investors go up against big names.

But in the end, the reports didn't lead to very much trading profit, and getting dragged into court would have been expensive. Sykes again shifted strategies. "I thought, What if you're real but you use scam artist techniques?" he says. Or as Goode puts it: "He embraced the douche aesthetic."

Sykes decided to pattern himself after Tom Vu, the Vietnamese American real estate speculator whose so-bad-they're-good infomercials in the 1980s and '90s showed him living a life of hedonistic luxury surrounded by bikini-clad models. In 2012, as a Hanukkah present to himself, Sykes bought the most ostentatious car he could think of, an orange Lamborghini. He paid \$60,000 to appear on a Bravo life-on-a-yacht reality-TV show called *Below Deck* that he knew would



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portray him as a sleazy stock trader. He began flying private jets and staying in presidential suites so he could make videos of himself splurging and then post them on YouTube and Instagram. “All his marketing makes him look like a jerk,” says his mom. Yet it’s also made him wealthier than trading ever did.

Sykes’s life is now a virtuous (for him) circle of sermonizing, trading, and promotion. There is little in his personal life he won’t transmute into attention. When *Bloomberg Businessweek* asked for proof that he was actually dating his girlfriend, Bianca Alexa, and not just paying her to act as a live prop to boost subscriptions, Sykes e-mailed a scanned copy of the invoice for an engagement ring he’d purchased. (Weeks later he proposed during a vacation to Bali; she said yes.) Although he says he was banned from CNBC after posting on his blog an unflattering paparazzi-style photo of then-host Maria Bartiromo from the rear—the network declined to comment—he’s appeared on other channels.

While avoiding any talk of how many of his customers lose some or all of their money, Sykes makes full use of his outlier success stories. When a second customer, Tim Grittani, claimed to have made more than \$1 million, the two were written up on *CNNMoney* and appeared on Fox News and Fox Business Network. “I’ve hung out with Tim when the cameras aren’t rolling, and he’s just a completely different person,” Grittani says. “When he’s not selling something he’s just a normal guy. The difference is incredible.”

Once a week, Sykes lets paying customers of Profit.ly access a live feed of his computer screen during a trading session. Making his wagers in front of an audience has made him more cautious. “People will cancel my newsletters if I don’t trade,” he says. “More people will cancel if I make a bad trade.” Sykes says he began 2014 with a \$500,000 account. He ended the

year up about \$875,000, or a gain of 175 percent, his best year ever, he said in December. Meanwhile, he said he netted about \$4 million from Profit.ly sales last year, including newsletter subscriptions, DVDs, and fees to access the writing of other self-styled gurus. The site encourages users to make all of their trades public; “transparency” is a big buzzword. Two years ago, a client from Tajikistan who says he made \$250,000 using Sykes’s system thanked him by naming his first-born son Timur.

Goode and Grittani acknowledge that when it comes to Sykes’s students, they’re the exception rather than the rule. Both now get paid to run webinars on Profit.ly and have seen how Sykes’s douche marketing can attract the wrong sort of people. “Some new students don’t realize how much the odds are against them,” Goode says. “They’re gamblers. They’ll say, ‘If I win on this trade my wife gets a new camera. If I lose I’ll be prostituting myself in a Walgreen’s parking lot.’”

The live stream Sykes is conducting from his room at the Gansevoort hotel ends on a positive note. Near the close of the market, while still broadcasting, he buys shares of Technical Communications. His history tells him that the stock, having just won that contract from the Egyptian government, has a good chance of jumping \$1 a share before fading again. Sure enough, by the next morning it’s done exactly that. Selling his stake just a few hours after he’d bought it, Sykes has banked a profit of \$3,700, more than enough to pay for that night’s stay. He’ll later post an Instagram video of his digs, of course. Although by then, true to form, the hype will have taken over, and Sykes will have inflated the price of the room to \$5,000. “Everything goes hand-in-hand,” Sykes says, leaning back in his chair, smiling, still in his bathrobe. “I teach, I trade, and I make money. It’s a beautiful marriage.” **B**

Expensive

Vrrroooooommm

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I Think We Should Allocate With Other People

How to break up with your expensive adviser

By Ben Steverman



It's always so sweet in the beginning: You meet a financial adviser and hit it off. You smile at the same things—he thinks energy stocks are undervalued, too! He's great on the phone, and it's like he just gets you...and your thoughts about prudent allocation to fixed income.

But you start to notice things. Your adviser always wants to go with pricey funds, never the cheaper ones you suggest. Then you find out: He's been charging fees 10 times higher than you could pay elsewhere. You dump him.

These are rocky times for the adviser-client relationship. The Internet makes it easy to know your options, from passive index fund giants to startups that dispense advice by algorithm. Meanwhile, Wall Street is fighting an Obama administration proposal that would require advisers to put clients' interests first. The debate raises justifiable suspicions that some advisers are motivated more by commissions than by clients' financial happiness. If you're thinking of ending a dysfunctional, costly relationship, here are four suggestions.

1. Go ahead and snoop

The number of advisers has fallen 12 percent since 2008, according to research firm Cerulli Associates



Brandon Smith, 36, who works at a credit union in Casper, Wyo., kept telling his adviser he preferred low-cost investments. But he never got a clear answer on how much he paid in fees. He logged on to Financial Guard, a site that analyzes holdings, and found out: a huge 2.16 percent. "I don't think he was listening," Smith says. **"Maybe his own interests superseded mine."** Smith fired him and moved to funds charging only 0.22 percent.

2. Keep it professional



Tyler Clayton's financial adviser was a college friend. So it was awkward when the Columbus, Ohio, resident, 29, decided he wanted direct control of his money. His adviser just didn't seem to be adding much. When Clayton called to end things, "he told me it was a big mistake, that he was working for me"—but didn't muster any evidence Clayton found convincing. **"I tried to keep it brief,"** he says.

3. Be ready for pushback



Pulling your assets from an adviser hurts more than his pride—it hurts his bottom line. Sometimes resistance is good: If a client wants to gamble it all on Bitcoin, the adviser has a duty to try to talk him out of it. But if a client simply prefers a passive index fund, the adviser shouldn't object too loudly. **"There's a fine line between helping educate a client and scaring someone,"** says Patrick Clark, an adviser at online investment firm FutureAdvisor.

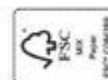
4. Feel free to be a coward

The number of "self-directed" investors is growing 4.9 percent a year, according to research firm Celent



A phone call or e-mail may be common courtesy when ending the relationship, but it's not necessary. "You don't have to tell them what you're doing and why," says Sheryl Garrett of the Garrett Planning Network. Simply fill out a form with your new, low-cost asset manager to **have money transferred automatically** from your old firm.

Bloomberg Businessweek (USPS 900 900) March 23 - April 5, 2015 (ISSN 0007-7163) \$ Issue no. 4420 Published weekly, except one week in January, March, June, and August, by Bloomberg L.P. Periodicals postage paid at New York, N.Y., and at additional mailing offices. Executive, Editorial, Circulation, and Advertising Offices: Bloomberg Businessweek, 731 Lexington Avenue, New York, NY 10022. POSTMASTER: Send address changes to Bloomberg Businessweek, P.O. Box 37626, Boone, IA 50037-0526. Canada Post Publication Mail Agreement Number 41959020. Return undeliverable Canadian addresses to DHL Global Mail, 355 Admiral Blvd., Unit 4, Mississauga, ON L5T 2N1. E-mail: bwmcasters@cdnlmail.com. GST #R12829 9636 RT0001. Copyright 2015 Bloomberg L.P. All rights reserved. Title registered in the U.S. Patent Office. Single Copy Sales: Call 800 635-7200 or log on to our website: <http://www.bloomberg.com/casaleary> manage.htm. Educational Permissions: Copyright Clearance Center at info.copyright.com. Reprints & General Permissions: The YGS Group at 600 290-5460 x100 or bloombergreprints@theYGSgroup.com. PRINTED IN THE U.S.A. CPPAP NUMBER 041N68030



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